DATA SCIENCE CLUB

KG REDDY College of Engineering & Technology
AN AUTONOMOUS INSTITUTION

Department of Computer Science and Engineering - Data Science

Academic Year 2024-2025

ECHOES OF BRILLIANCE

The magazine serves as a comprehensive reflection of the Department of Data Science, encompassing a range of academic and professional activities. It features seminars on emerging trends, notable achievements of faculty and students, and updates on ongoing initiatives.

Department of Computer Science and Engineering - Data Science

Excellence in the Department of Computer Science and Engineering – Data Science

The Department of Computer Science and Engineering – Data Science is committed to fostering a dynamic and intellectually stimulating academic environment. With a strong focus on both theoretical foundations and practical applications, the department equips students with the essential skills and knowledge required to excel in the ever-evolving field of data science and technology. Through a well-structured curriculum, state-of-the-art resources, and experienced faculty, the department ensures that students are prepared to meet industry demands and contribute to technological advancements.

Faculty Expertise and Mentorship

The faculty members of the department are highly qualified and bring a wealth of academic and industry experience. Many faculty members are actively engaged in research, with some pursuing doctoral studies to further their expertise. Their commitment to continuous learning ensures that students receive education that is aligned with the latest technological developments. The faculty fosters a culture of academic excellence by integrating real-world applications into their teaching methodologies, thereby enhancing students' conceptual understanding and problem-solving abilities.

In addition to delivering high-quality instruction, the faculty plays a pivotal role in mentoring students. The department conducts structured mentoring sessions, where faculty members closely engage with students to understand their academic progress, career aspirations, and personal challenges. These sessions provide individualized guidance, helping students navigate their academic journey effectively while also addressing any concerns related to career planning, skill development, and industry trends

Academic and Technical Initiatives

To keep students abreast of the latest advancements in the field, the department regularly organizes guest lectures, seminars, and technical workshops. These sessions provide students with insights from industry experts, researchers, and thought leaders, enabling them to stay updated with cutting-edge technologies and emerging trends. Hands-on workshops are designed to equip students with practical experience in critical areas such as machine learning, artificial intelligence, cybersecurity, and big data analytics.

Recognizing the importance of industry exposure, the department also facilitates industrial visits, allowing students to explore professional work environments and understand real-world applications of data science concepts. These visits provide valuable exposure to industry standards, workflows, and career opportunities, helping students bridge the gap between academic learning and professional requirements.

Encouraging Innovation and Career Growth

The department is dedicated to fostering innovation, creativity, and entrepreneurship among students. Through hackathons, coding competitions, and research-driven projects, students are encouraged to apply their knowledge in challenging and competitive environments. These initiatives not only enhance their problem-solving skills but also prepare them for real-world industry challenges.

Furthermore, the department organizes career development programs, sessions on higher education, and entrepreneurship workshops, providing students with guidance on post-graduate opportunities, business incubation, and career pathways. By facilitating interactions with successful entrepreneurs, academicians, and industry leaders, the department helps students explore diverse career prospects and make informed decisions about their professional futures.

Commitment to Holistic Student Development

Beyond academics, the department emphasizes holistic student development by nurturing leadership, teamwork, and critical thinking abilities. Various student-led initiatives, clubs, and extracurricular activities create a collaborative and engaging learning environment. The department ensures that students not only gain technical expertise but also develop essential soft skills such as communication, teamwork, and adaptability, which are crucial for success in today's competitive job market.

Through a combination of expert faculty mentorship, hands-on learning, industry collaboration, and career-oriented programs, the Department of Computer Science and Engineering – Data Science continues to shape future-ready professionals. By fostering a culture of excellence, innovation, and lifelong learning, the department remains committed to empowering students with the skills and knowledge required to thrive in the fast-evolving world of technology.

KG REDDY College of Engineering & Technology
AN AUTONOMOUS INSTITUTION

VISION AND MISSION

Our Vision:

- To be recognized as a department of excellence by stimulating a learning environment in which students and faculty will thrive and grow to achieve their professional, institutional and societal goals.

Our Mission:

- To provide high quality technical education to students that will enable life-long learning and build expertise in advanced technologies in Computer Science and Engineering.
- To promote research and development by providing opportunities to solve complex engineering problems in collaboration with industry and government agencies.
- To encourage professional development of students that will inculcate ethical values and leadership skills while working with the community to address societal issues.

KG REDDY College of Engineering & Technology
AN AUTONOMOUS INSTITUTION

FACULTY

Mr. L. Govardhan
Assistant Professor & HOD
hod.csd@ kgr.ac.in

Mr. B. Ganesh
Assistant Professor
gani@ kgr.ac.in

Mrs.P.Haindavi
Assistant Professor
haindavi284@ kgr.ac.in

Mrs. K.Gomathi
Assistant Professor
gomathi.k@ kgr.ac.in

FACULTY

Dr. Srinivas Jhade
Associate Professor
srjhade@ kgr.ac.in

Mr. M.Lakhsmikanth
Assistant Professor
mlaxmikaanth@ kgr.ac.in

Mrs. Afiya Parveen Begum
Assistant Professor
afiyaparveen@ kgr.ac.in

Mr. Amaresh
Assistant Professor
amareshkori@ kgr.ac.in

Committee Details:

DDC:

S:No	Name of Faculty	Designation	Position	Parent Organization
1	Mr.L.Govardhan	HoD, Assistant Professor	Chairman	KGRCET
2	Mr.B.Ganesh	Assistant Professor	Coordinator	KGRCET
3	Mrs.P.Haindavi	Assistant Professor	Member	KGRCET
4	Mr.M.Lakshmikanth	Assistant Professor	Member	KGRCET
5	Mrs.K.Gomathi	Assistant Professor	Member	KGRCET

PAC:

S:No	Name of Faculty	Designation	Position	Parent Organization
1	Mr.L.Govardhan	HoD, Assistant Professor	Chairman	KGRCET
2	Mr.M.Lakshmikanth	Assistant Professor	Coordinator	KGRCET
3	Mr.B.Ganesh	Assistant Professor	Member	KGRCET
4	Mrs.P.Haindavi	Assistant Professor	Member	KGRCET
5	Mrs.K.Gomathi	Assistant Professor	Member	KGRCET

Finance Committee:

S:No	Name of Faculty	Designation	Position	Parent Organization
1	Mr.L.Govardhan	HoD, Assistant Professor	Chairman	KGRCET
2	Mrs.P.Haindavi	Assistant Professor	Coordinator	KGRCET
3	Mr.B.Ganesh	Assistant Professor	Member	KGRCET
4	Mrs.K.Gomathi	Assistant Professor	Member	KGRCET

PRC:

S:No	Name of Faculty	Designation	Position	Parent Organization
1	Mr.L.Govardhan	HoD, Assistant Professor	Chairman	KGRCET
2	Mrs.Afiya Parveen Begum	Assistant Professor	Coordinator	KGRCET
3	Mr.B.Ganesh	Assistant Professor	Member	KGRCET
4	Mrs.P.Haindavi	Assistant Professor	Member	KGRCET
5	Dr.Jhade Srinivas	Associate Professor	Member	KGRCET
6	Mr.M.Lakshmikanth	Assistant Professor	Member	KGRCET
7	Mr.Amreesh Kori	Assistant Professor	Member	KGRCET

HEAD OF THE DEPARTMENT

Mr. L. Govardhan
Assistant Professor & HOD
+91 9597533830
hod.csd@ kgr.ac.in

Mr.L.Govardhan has 14 years of teaching experience and 2 year's experience in software industry, currently working as an Assistant Professor, Department of CSE-Data Science at K G Reddy College of Engineering and Technology, Hyderabad. He is Pursuing Ph.D. from Sathyabama University – Chennai, in the area of Cloud Computing using Machine Learning Techniques. He received his Master of Engineering (M.E) from Sathyabama University, Chennai, India in 2013. He received his Bachelor of Engineering (B.E) from Anna University, Chennai in 2006. He certified in Mainframe and received award on 2007. He was a Lecturer at Shri Sapthagiri Institute of Technology from March 2009 to April 2011. He was an Assistant Professor at Shri Sapthagiri Institute of Technology from May 2013 to January 2016. He was an Assistant Professor at Mizan Tepi University, Ethiopia from September 2016 to July 2023. He has published 5 Scopus conference papers and one journal.

HoD's Message:

Computer Science & Engineering is the field which deals with analyzing, designing hardware, software and operating systems for a computer system. Our students are trained in Programming skills, software design, Integration of Hardware and Software. The Department of this best engineering college for computer science has well equipped laboratories with 400+ latest Computers, Servers and latest software's like Oracle, Rational Rose, MATLAB, .NET etc. The Central Computing facility and internet center with a speed of 60 Mbps which are managed by the Department.

Various international and national conferences, seminars, guest lectures, workshops, webinars and training programs on like spoken tutorials – IIT, Bombay, Smart Hackathon India, IoT and Block Chain Current Technologies , Artificial Intelligence, Machine Learning etc are organized for students and faculty. Industrial visits and internship trainings are arranged by this B.Tech. Computer Science College for students to expose real time applications. The research work is carried out by the faculty along with students in the areas like Soft Computing, Green Computing, Image Processing, Cloud Computing, BigData and Data Mining. We are having Institutional Professional body membership like Computer Society of India (CSI) and IEEE Student Chapter.

JULY - 2024

Faculty Achievements:

- Mr. Ganesh received a certificate in the Faculty Development Program on “Machine Learning, Internet of Things, and SAP ABAP” Under the Code Unnati.
- Mr. Roshan Sanu Y received a certificate in the Faculty Development Program on “Machine Learning, Internet of Things, and SAP ABAP” under the Code Unnati.
- Ms. K. Gomathi received a certificate in a One-Week Workshop on Implementation of Student-Centered Pedagogies for Engineering Classrooms organized by the CEED.
- Mr. Roshan Sanu Y received a certificate in a One-Week Workshop on Implementation of Student-Centered Pedagogies for Engineering Classrooms organized by the CEED.
- Mr. Amaresh Kori received a certificate in a One-Week Workshop on Implementation of Student-Centered pedagogies for Engineering Classrooms organized by the CEED.
- Mrs. P. Haindavi received a certificate in the Faculty Development Program on "Exploring Computational Intelligence” organized by the School of Computer Science and Engineering, VIT-AP University, Amaravati.
- Mr. Roshan Sanu Y received a certificate in a One-Day Workshop on “Implementation of Project based Learning for PBA Mini-Projects & Major Projects” organized by the CEED.
- Ms. K. Gomathi received a certificate in a One-Day Workshop on “Implementation of Project based Learning for PBA, Mini-Projects & Major Projects” organized by the CEED.
- Mr. L. Govardhan received a certificate in a Faculty Development Program on Recent Advancements in Machine learning and Deep Learning organized by Pencil Bitz Academy.
- Mr. B. Ganesh received a certificate in a Faculty Development Program on Intellectual Property Rights in the Age of AI, ML, Cyber Security and Blockchain organized by Mangalmay Institute of Management & Technology.
- Mr. Y. Roshan Sanu received a certificate in a Faculty Development Program on Full Stack Development using Java organized by G. Narayanamma Institute of Technology & Science.
- Mr. B. Ganesh received a certificate in a One-Day Workshop on Recent Developments in Design of Medical Devices using latest Technologies to diagnose various health conditions organized by Shadan college of Engineering and Technology.
- Mr. L. Govardhan received a certificate in a One-Day Workshop on Python programming with Industrial Perspective organized by Pencil Bitz Academy.

AUGUST - 2024

1. A Seminar on “Mastery in Data Science” was conducted on 10thAugust 2024

A seminar on "Mastery in Data Science" was conducted, featuring Mr. Ravishekar Thallapally, Founder and CEO of Trizula Digital Solutions, as the resource person. The session provided students with a deeper understanding of data science concepts, techniques, and tools used in real-world applications. It covered essential aspects such as data exploration, statistical analysis, predictive modeling, and data visualization. Students learned how to extract meaningful insights from large datasets and apply analytical methods to solve complex problems. The seminar emphasized the growing importance of data-driven decision-making, equipping students with the necessary skills to excel in the evolving field of data science.

Impact on the students:

The seminar had a significant impact on students by enhancing their understanding of data science and its real-world applications. It strengthened their technical and analytical skills, enabling them to explore, analyze, and interpret complex datasets effectively.

Student Achievements:

- IV-CSE-Data Science student P. Sai Vinay was successfully completed the internship in DRDO.
- III- CSE-Data Science Students D.Venu, R. Likhitha, Ch.Manasa, K. Sravani, Mohammed Adyan Ahmed was successfully completed “one week workshop on Fusion 360 & Essentials of 3D Printing” organized by 3D Printing Club under Department of Mechanical Engineering.

SEPTEMBER - 2024

Faculty Achievements:

Ms. K. Gomathi was recognized for her outstanding contribution to the field of AI by receiving a certificate for presenting her technical paper titled "Research and Industry Symposium on Explainable AI." Her paper explored key advancements in the area of explainable AI, shedding light on the importance of transparency and interpretability in machine learning models.

Students Achievements:

Ms. Akula Vaishnav was awarded a certificate for successfully completing the SAWIT.AI Learnathon Program, held on 21st September 2024. This intensive program focused on enhancing participants' knowledge and skills in the field of artificial intelligence and exposure to the latest AI technologies and techniques.

- Ms. Siri Kolluru received a certificate for completing a 16 week internship in Data Science and Analytics from 18 May 2024 to 07 September 2024.

- Ms. Pattargatti Sneha received a certificate for completing a 16 week internship in Data Science and Analytics from 18 May 2024 to 07 September 2024.

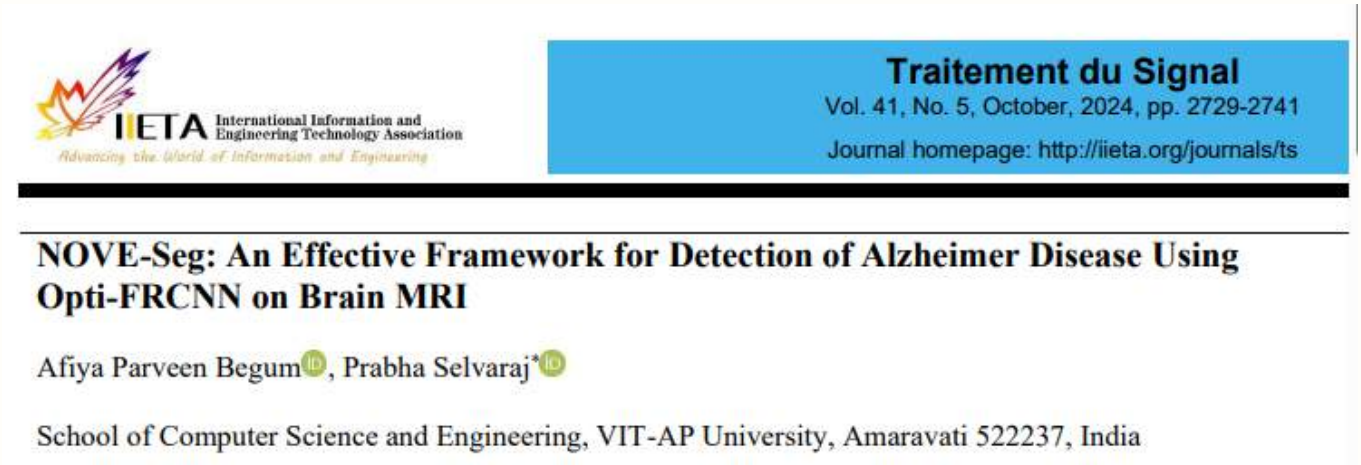
OCTOBER - 2024

Faculty Achievements:

- Ms. K. Gomathi received a certificate in a One-Day Workshop on “Implementation of Project based Learning for PBA, Mini-Projects & Major Projects” organized by the CEED.

- Ms. B. Ganesh received a certificate for his dedication, Enthusiasm and contribution in the Data Science Club on 28th and 29th October 2024.

- Ms. Afiya Parveen Begum published a paper entitled NOVE-Seg: An Effective Framework for Detection of Alzheimer Disease Using Opti-FRCNN on Brain MRI.



NOVEMBER - 2024

1. A Guest Lecture on “Web and Social Media Analytics” was conducted on01st November 2024

A guest lecture on "Web and Social Media Analytics" was conducted, with Mr. R. Bhanu Prasad as the resource person. The session provided students with valuable insights into analyzing large volumes of raw data to identify trends, patterns, and correlations for data-driven decision-making. It also highlighted the advantages of Big Data Analytics and its real-time applications across various industries. Students gained a deeper understanding of how big data technologies are leveraged to optimize business strategies, enhance user engagement, and drive innovation in the digital landscape.

Impact on the students:

The lecture provided students with a deeper understanding of Web and Social Media Analytics, enhancing their ability to analyze large datasets for meaningful insights. It strengthened their knowledge of Big Data Analytics, helping them grasp its real-time applications and impact across industries. The session also encouraged data-driven thinking, inspiring students to explore careers in analytics, digital marketing, and data science.

2. A Workshop on “Data Mining” was conducted on 22nd November 2024.

A workshop on "Data Mining" was conducted, with Mr. Mohana Naga Ravi Kumar Araja as the resource person. The session provided students with a comprehensive understanding of machine learning algorithms and their real-world applications. Students learned how to extract meaningful insights from large datasets through data mining techniques. The workshop also covered the practical implementation of data mining, its significance across various industries, and its role in deriving actionable insights for decision-making.

Impact on the students:

The lecture provided students with a deeper understanding of Web and Social Media Analytics, enhancing their ability to analyze large datasets for meaningful insights. It strengthened their knowledge of Big Data Analytics, helping them grasp its real-time applications and impact across industries. The session also encouraged data-driven thinking, inspiring students to explore careers in analytics, digital marketing, and data science.

3. A Guest Lecture on "Data Structures" was conducted on 28th November 2024

A guest lecture on Data Structures was conducted, with Mr. Kottu Santhosh Kumar as the resource person, providing students with a comprehensive understanding of key concepts and practical implementations in data structures. The session emphasized the importance of access efficiency trade-offs among different data structure implementations and combinations, helping students grasp the impact of choosing the right data structure for various computational tasks. Mr. Kumar covered a wide range of fundamental and advanced data structures, including hash tables, binary and general tree structures, search trees, tries, heaps, graphs, and AVL trees, offering insights into their applications and efficiency in different scenarios. Additionally, students were introduced to pattern-matching algorithms and their role in real-time applications, enabling them to analyze and evaluate data structures in real-world scenarios. The session not only strengthened their theoretical foundation but also encouraged them to apply these concepts in practical programming challenges, fostering problem-solving skills and a deeper interest in algorithmic optimization and computational efficiency.

Impact on the students:

The guest lecture had a profound impact on students by enhancing their understanding of data structures and their real-world applications. It helped them grasp the trade-offs in access efficiency, improved their ability to design and implement efficient programs, and deepened their knowledge of graph traversal methods and pattern-matching algorithms. The session also inspired students to explore advanced problem-solving techniques, strengthening their analytical and computational thinking for future academic and professional pursuits.

3. A Guest Lecture on "Web Programming" was conducted on 30th November 2024.

A guest lecture on Data Structures was conducted, with Mr. Manzoor Mahamad as the resource person, providing students with valuable insights into web development and programming concepts. The session introduced students to HTML, CSS, and JavaScript, guiding them on how to use these fundamental technologies to create and structure a website.

Mr. Mahamad explained the significance of interfaces, detailing their role in programming and real-world applications, as well as the importance of applets and their usage in software development. Students also gained an understanding of CSS styles, learning how to apply them effectively in website design to enhance visual appeal and user experience. By the end of the session, students had a clearer understanding of how frontend technologies, interfaces, and applets contribute to building modern, dynamic web applications, inspiring them to explore further in the field of software and web development.

Impact on the students:

The guest lecture had a significant impact on students by enhancing their understanding of web development technologies like HTML, CSS, and JavaScript. . Overall, it sparked interest in web development, inspiring students to pursue further learning and projects in the field of modern software and web technologies.

4. Industry visit on "NextWave Solutions" for II-I-Sem Students on 04thNovember.2024.

An industry visit to "NextWave Solutions" was organized, where students had the opportunity to gain firsthand exposure to real-time project environments.

The session was led by Mr. Vinay, an associate from NextWave Technologies, Gachibowli, Hyderabad, who provided valuable insights into the company's technological advancements and innovative approaches.

During the visit, students learned about real-world industry practices, including how cutting-edge ideas are developed, implemented, and optimized to create impactful solutions.

They were introduced to the various phases of project development, from ideation and planning to execution and deployment, giving them a practical understanding of how technology-driven companies operate.

The visit also highlighted the importance of problem-solving skills, teamwork, and adaptability in a professional setting.

By witnessing the implementation of real-time projects, students were able to bridge the gap between academic learning and industry expectations, inspiring them to explore new technologies, innovative methodologies, and career opportunities in the IT sector.

This experience motivated students to enhance their technical skills and better prepare for the dynamic challenges of the corporate world.

1.Industry visit to “NextWave Solutions”.

An Industry visit to “NextWave Solutions”; Mr.Vinay, an associate from Next Wave Technologies, Gachibowli, Hyd. was the resource person. In thisVisit, Students learned about real-time ideas in the real-time project environment and how innovative ideas have been implemented in the real-time environment by taking the place in "Next Wave" Technologies.

Department Activities:

The Department of Computer Science and Engineering-Data Science has organized an Online FDP on “Applications of Data Science Analytics” in association with the Pencil Bitz.

A Two-Days Certification Course on “Introduction to Artificial Intelligence” was organized for II and III-year students.

Faculty Achievements:

- Mr.L.Govardhan got a certificate of an FDP on“Applications of Data Science Analytics” from KGReddy College of Engineering and Technology.

- Mr.B.Ganesh got a certificate of an FDP on “Applications of Data Science Analytics” from KG Reddy College of Engineering and Technology.

- Mrs.P.Haindavi got a certificate of an FDP on “Applications of Data Science Analytics” from KG Reddy College of Engineering and Technology.

- Mrs. Gomathi Karthik got a certificate of an FDP on “Applications of Data Science Analytics” from KG Reddy College of Engineering and Technology.

- Mrs. Afiya Parveen Begum got a certificate of FDP on “Applications of Data Science Analytics” from KG Reddy College of Engineering and Technology.

- Mr. B. Ganesh got a certificate of ATAL FDP on “The Revolution of Large Language Models (LLMs) in Artificial Intelligence” from Vidya Jyothi Institute of Technology.

- Mrs.P.Haindavi got a certificate of ATAL FDP on “The Revolution of Large Language Models (LLMs) in Artificial Intelligence” from Vidya Jyothi Institute of Technology.

- Mrs. Gomathi Karthik got a certificate of ATAL FDP on “The Revolution of Large Language Models (LLMs) in Artificial Intelligence” from Vidya Jyothi Institute of Technology.

Students Achievements:

- Our III-Year students P.Rajith and Y.Lokesh Chandra are Participated as a team member in the PALS Tinkathon,an event with activity and hands-on-project-based workshop.

- Our III-year students Rangdal Pavansai and Wagmare Sanjana are participated in InnoFiesta 2024 at HITHAM College and They got 3rd Position.

- Our II-Year students Team-1:T.Vaishnavi,Sk.Kulsum,Vishnu Vardhan,Akanksha,Team-2:Sai Teja, Aparna and Sai Kiran got Rs.50,0000 Price money in SAHYOG 2.0 was conducted By KGR Social Innovation and Entrepreneurship Summit.

DECEMBER - 2024

Faculty Achievements:

- Mr. L.Govardhan received a certificate of ATAL-FDP on “Innovation with Generative AI: Transforming Large Language Models for Real-World”.
- Dr. Srinivas Jhade received a certificate of ATAL-FDP on “Innovation with Generative AI:Transforming Large Language Models for Real-World” from KG Reddy College of Engineering and Technology.
- Mr.B.Ganesh received a certificate of ATAL-FDP on “Innovation with Generative AI: Transforming Large Language Models for Real-World” from KG Reddy College of Engineering and Technology.
- Mrs.P.Haindavi received a certificate of ATAL-FDP on “Innovation with Generative AI: Transforming Large Language Models for Real-World” from KG Reddy College of Engineering and Technology.
- Mr.L. Govardhan received a certificate of STTP on “Java Full Stack with React JS & AI” Dr.V.R.K. Women’s College of Engineering & Technology in Association with Brainovision Solutions,Hyderabad.
- Mr.B.Ganesh received a certificate of STTP on “Two Week Winter School on Computer Vision and Speech Processing” from Chaitanya Bharathi Institute of Technology(Autonomous),Hyderabad.

JANUARY - 2025

Students Activities:

S.No	NAME OF THE STUDENTS	EVENTS PARTICIPATED
1	Thalla Vaishanavi	Cyber Security Simulation
2	Siri Kolluru	Code Unnati Program
3	W.Sanjana	Code Unnati Program
4	Thalla Vaishanavi	Data Analytics Simulation
5	Laxmi Prasanna	Inno Byte
6	Pavan Sai	SWECHA
7	W.Sanjana	KiTech


edunet

TASK

SAP

CERTIFICATE
OF COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

Wagmare Sanjana

from **K G Reddy College of Engineering and Technology** for participating in **Advance Course** and successfully completing the training on Emerging Technologies (Machine Learning, Internet of Things, Deep Learning, Computer Vision and SAP Advanced Business Application Programming (ABAP) on Business Technology Platform (BTP)) during 2024-2025 under Code Unnat Program, a CSR initiative of SAP and implemented by Edunet Foundation.

Shrikanth Sinha
Chief Executive Officer
Telangana Academy For Skill & Knowledge

Nagesh Singh
Chairman
Edunet Foundation


AI DAYS 2025

Sanika

CERTIFICATE
OF PARTICIPATION

This certificate is proudly presented to

Rangdal Pavansai

Dr. L. Pratap Reddy


KITECH

CERTIFICATE
OF CAMPUS AMBASSADOR

THIS CERTIFICATE IS PROUDLY PRESENTED TO

Wagmare Sanjana

AYUSH SHARDIYA
ACADEMIC DIRECTOR

NARMADHA P
HR D MANAGER


edunet

TASK

SAP

CERTIFICATE
OF COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

Siri Kolluru

from **K G Reddy College of Engineering and Technology** for participating in **Advance Course** and successfully completing the training on Emerging Technologies (Machine Learning, Internet of Things, Deep Learning, Computer Vision and SAP Advanced Business Application Programming (ABAP) on Business Technology Platform (BTP)) during 2024-2025 under Code Unnat Program, a CSR initiative of SAP and implemented by Edunet Foundation.

Shrikanth Sinha
Chief Executive Officer
Telangana Academy For Skill & Knowledge

Nagesh Singh
Chairman
Edunet Foundation

Feburary - 2025

1. A Workshop on "Full Stack Web Development" was conducted on 21st February 2025.

On February 21, 2025, the Data Science Club and the Department of Computer Science and Engineering - Data Science (CSD) at KG Reddy College of Engineering & Technology held a one-day workshop on Full Stack Web Development for 63 students from III-CSE-Data Science. The workshop was led by Mr. A.S. Arun Kumar, a developer and team lead at Levitica Technologies, Hyderabad. The workshop's goal was to teach students how to build responsive and interactive web interfaces using HTML, CSS, and JavaScript, as well as server-side programming with Node.js, Express.js, and Django. It also covered databases like MySQL and MongoDB and the deployment of applications using platforms like AWS, Firebase, or Vercel

The workshop began with an introduction to web development and HTML, followed by explanations of JavaScript and CSS for front-end development. The resource person also discussed back-end development using server-side languages such as Python and Node.js frameworks. Other topics included Java Database Connectivity (JDBC) for connecting Java applications to relational databases and an introduction to GitHub for version control and collaboration.

After the lecture sessions, students participated in a hands-on session where they individually installed the necessary software and developed applications like registration forms. The resource person and his team clarified students' doubts during this time. The workshop concluded with a question-and-answer session and a vote of thanks from the Head of the Department, Mr. L. Govardhan, and Mr. Bande Ganesh

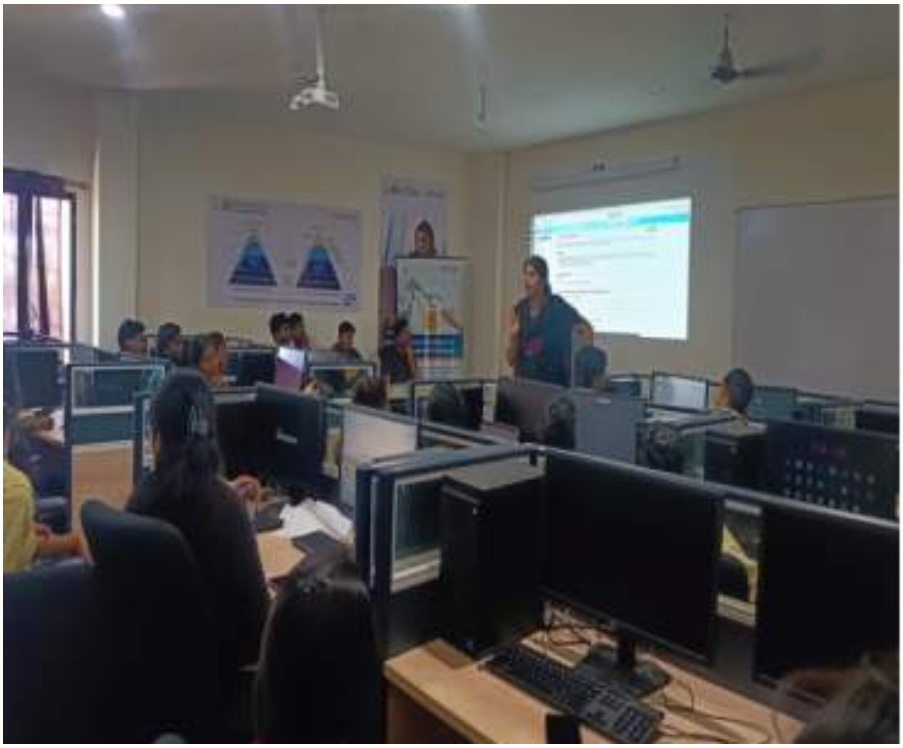
Impact on the students:

The workshop had a significant impact on the participating students, equipping them with practical skills and knowledge to become job-ready in the field of web development. Through hands-on projects, students gained real-world experience and the ability to build dynamic web applications from scratch. They learned to design, implement, and optimize relational and non-relational databases and how to build secure and scalable APIs for web applications. The workshop also provided students with experience in deploying web applications to production environments efficiently. Furthermore, the introduction to GitHub and its features taught them about version control, which is essential for collaborative software development. One student, Pavan Sai, even used GitHub to save his skill development code and share it with friends, demonstrating the immediate application of the learned concepts.

March - 2025

1. A Guest Lecture and Hands on session on “Big Data Analytics” was conducted on 06th .March.2025

A guest lecture was conducted on Big Data Analytics; Dr. Praveen Kumar Yechuri, Assistant professor & manager-training & Placements, VJIT and Dr. A. Swarna, Assistant Professor, VJIT was the resource persons. The students gained insights into Big Data concepts, characteristics and its significance in various industries. Students understood how Big Data works with cloud platforms, including SAAS,PAAS and IAAS models and Hands-on experience with Hadoop tools like pig, HBase and Cassandra for real-world data Analysis. The session provided valuable insights into industry trends, carrer opportonities and essential skills in Big data Analysis.



Faculty Achievements:

- K.Gomathi assistant professor from Data science department completed 6 month IIECP certification program conducted by IUCEE in Engineering Education

- Mrs.Afiya Parveen Begum got certificate of FDP on “Capacity Building Programme: From Chalkboards to Chatbots-A faculty Journey into AI” from Malaviya Mission Teacher Training Program of the university Grants Commission (UCG) organized by the Indian

- Mr.B.Ganesh got certificate of FDP on “Revolutionizing Education with Generative AI: Teaching and Learning Strategies” from Narsaraopeta Engineering College(NEC) in collaboration with Blackbucks.

Students Achievements:

- Our II-Year students T. Vaishnavi, Sk. Kulsum, D.Vishnu Vardhan, C. Akanksha, S. Kishore got First prize Rs.1500 in Poster Presentations was conducted by AVN College of Engineering and Technology, Ibrahimpatnam.

- Our II-Year students V. Sai Teja, B. Aparna , G. Sai Kiran, A. Lakshmi Priya got Rs.5000 Price money in Project Expo was conducted By KG Reddy College of Engineering and Technology.

1. Our III-Year students M.Vaishnavi,V. Srinivas, N. Keerthana ,V.Manjula and B.Ganesh are participated in the PALS InnoWAH final round held at IIT Madras.
2. Our III-Year Student U. Sai Hruthvin and II-Year Student B. Benoni got Second prize in kabaddi at INVICTA-2025 , KGRCET.
3. Our III-year Students B.Sainath Reddy, K.Rakesh and II-Year Students B. Benoni, S.Vamshi Krishna and V. Anil got First Prize in Cricket at INVICTA-2025, KGRCET.

2. WORLD DATA SCIENCE DAY was conducted on 13th March.2025

Objective:

The objective of Data Science Day was to create an interactive platform where students could explore and deepen their understanding of data science concepts. The event aimed to enhance problem-solving, analytical, and debugging skills through engaging activities and competitions. It also sought to provide real-world insights into the applications of data science and highlight the career opportunities within the field. By incorporating hands-on learning through events like Data Charades, the Quiz, and the Debugging Challenge, the day encouraged active participation and skill development. Additionally, it aimed to foster connections between students and industry professionals through expert talks and networking opportunities.

Data Charades, Connections, the Quiz Competition, and the Debugging Challenge.

In the Data Charades activity, 11 teams participated in a game where they had to guess data science-related words from clues. Each round lasted 10 minutes, and the objective was to help students become more familiar with data science concepts in a fun way. The team with the most correct guesses was declared the winner.

Another team-based event,
Connections, also involved 11 teams. Participants were shown images related to data science on a projector and had to identify the connection between them. The goal of this activity was to enhance students' ability to link different data science technologies and applications. The team that identified the most correct connections won the event.

For individual participants, the event offered the Quiz Competition and the Debugging Challenge.

The Quiz Competition consisted of multiple-choice and short-answer questions that covered a range of topics including data science, AI, and Python. This quiz was designed to test students' theoretical and practical understanding of these concepts. The person with the highest number of correct answers was the winner.

The Debugging Challenge was another individual event that presented participants with 10 coding-related debugging questions. The primary goal was to improve students' problem-solving and debugging skills in programming. The individual who solved the most errors correctly won the challenge.
The events were a huge success, with active participation from students in all activities. The guest speech by Abhishek Mehta, an industry expert, also provided students with valuable career guidance and insights into the real-world applications of data science. Finally, trophies and certificates were presented to the winners of each event, as well as a special recognition for the overall top scorer.

Event Highlights:

Student Engagement: Active participation from students in all activities.

Industry Insights: The guest speech provided career guidance and real-world applications of data science.

Practical Learning: Hands-on exposure to problem-solving and debugging in coding competitions

Winners Recognized for Each Event:

1. Data Charades – Winning Team
2. Connections – Winning Team
3. Quiz Competition – Top Scorer
4. Debugging Challenge – Top Scorer

· Trophies and Certificates: Presented by Chief Guest Abhishek Mehta, Daneal Sir, HoD, and the Club President.

· Special Recognition for the Overall Top Scorer of the Event.

Closing Ceremony & Vote of Thanks:

· Closing Speech by Faculty Coordinator: Expressing gratitude to all participants and guests.
· Thanking the Organizers & Volunteers for making the event a success.
· Encouragement for Future Participation in data science workshops and club activities.

April - 2025

1. A Guest Lecture session on “Design and Analysis of Algorithms” was conducted on 12th .April.2025

A guest lecture was conducted onDesign and Analysis of Algorithms; Dr.V. Muniseker, Professor, Department of Information technology, Vardhaman college of Engineering was the resource person.The students gained the knowledge about greedy approach how travelling salesman problem, knapsack problem and job sequencing scheduling algorithm processed and compare the same with dynamic programming concept.

Impact on the students:

The session, led by Dr. V. Muniseker, a Professor from Vardhaman College of Engineering, helped them understand complex topics. They gained knowledge about the greedy approach and how it applies to problems like the travelling salesman problem, the knapsack problem, and the job sequencing scheduling algorithm. Furthermore, they learned to compare this approach with the dynamic programming concept. The lecture's content provided them with a deeper understanding of these fundamental algorithms and their real-world applications.

2. A Guest Lecture session on “Object Oriented programming Through Java” was conducted on 26th .April.2025

A guest lecture was conducted on Object Oriented programming Through Java; Mrs T. Anusha, Assistant Professor, Department of CSE (AI & ML), VJIT. Was the resource person.The students gained the knowledge of OOPs Concepts and Its real time examples and students are able to understand and apply various object features. Students are gained the knowledge about interfaces and packages and where we are using that concepts and also they learned the AWT Classes.

Impact on the students:

Students were positively impacted by the guest lecture on Object Oriented Programming Through Java, delivered by Mrs. T. Anusha from VJIT. The session helped them gain a better understanding of OOPs concepts and their real-time applications. As a result, students are now able to comprehend and apply various object features. They also learned about interfaces and packages, including how and where these concepts are used, and were introduced to AWT Classes. This lecture provided them with valuable, practical knowledge.

Faculty Achievements:

1.Mr.L.Govardhan got conformation from his paper is published in AIP Paper title of "Cloud Task Scheduling using Context-Aware Task Scheduling with Machine Learning" (CATSM-ML).

Student Achievements:

1. Our students also got first prize in Kabaddi Intercollege competition happened in VJIT College and Global College of Engineering and technology.

(II year CSE-DS Student won cup in Kabaddi)

2. Our II-Year Student Pothuraju Prashanth is doing 30 days certification course on "Android apps with Artificial Intelligence" on Udemy.

3.Student Articles

KG REDDY

Winning at AVN College Hackathon: A Celebration of Innovation & Team Spirit

Participating in the Hackathon hosted by AVN College was a remarkable experience that tested our creativity, technical acumen, and teamwork. Winning First Prize in the Poster Presentation for our project "Onion Depot" was a proud moment, reflecting our commitment to solving real-world problems through innovative thinking. The guidance from our mentors and the collaboration within our team were key to our success.

TAALLA VAISHNAVI

ID: 23QM1A6752

Project Title: ONION DEPOT

Our project focused on creating a smart, efficient solution for onion storage and management. Combining sensor technology with automation, Onion Depot addresses common issues like spoilage and inefficient inventory control. We presented our concept through a detailed and well-structured poster that demonstrated our problem-solving approach and technical strategy.

Team Members:

Innovation in Action

From brainstorming sessions to final execution, our team worked cohesively to develop a solution that was both practical and scalable. We focused on clarity, creativity, and feasibility in our presentation, which helped us stand out among the participants.

Overcoming the Challenge

Despite facing tight timelines and pressure, we stayed motivated through mutual support and enthusiasm. Regular discussions, feedback loops, and division of tasks ensured that every member contributed meaningfully.

May - 2025

1. A Guest Lecture on “Operating System was conducted on 03rd May 2025

A guest lecture on "Operating System" was organized by the Department of Computer Science & Engineering - Data Science (CSD) for second-year students on May 3, 2025, at KG Reddy College of Engineering & Technology. The event, which was attended by 61 students, was designed to introduce them to operating system concepts, including CPU scheduling, deadlock, and the design and development of operating systems.

The guest speaker was Mr. Kottu Santosh Kumar, an Assistant Professor from the Department of IT at Vardhaman College of Engineering, Hyderabad Mr.Kottu Santosh Kumar,Assistant Professor,Dept.of IT, Vardhaman College of Engineering, Hyderabad,,has been invited for the One Day Workshop. The session started with addressing the participants and introduction of the guest by Dr.Srinivas Jhade, Associate Professor, Computer Science and Engineering- Data Science.

The guest lecture on Operating Systems served as a valuable platform for students to deepen their understanding of fundamental concepts and their real-world applications. It was a well-structured session, starting from basic introductions and progressing to more specific topics like file system management and system calls. The event successfully met its objectives, preparing students to better understand the intricacies of operating systems and their role in computing

Impact on the students:

The guest lecture on Operating Systems had a notable impact on the students by providing them with a deeper understanding of fundamental concepts and their practical applications. Students were equipped with the ability to manage access to a computer and its files, demonstrating a solid grasp of core operating system functions. The session also enhanced their problem-solving skills, as a key outcome was the ability to "recognize and resolve user problems with standard operating environments".

Furthermore, the lecture provided valuable practical knowledge regarding the interaction between programming languages, operating systems, and computer architectures. This practical focus was particularly evident in the detailed discussion on File System Interface and Operations. The students were taught about various access methods, directory structures, protection, and allocation methods.

2. A Guest Lecture on “Search Engine Optimization and Web Analytics” was conducted on 03rd May 2024

A seminar on
"Search Engine Optimization and Web Analytics" was held on May 3, 2025, at KG Reddy College of Engineering and Technology, organized by the Department of Computer Science and Engineering-Data Science in collaboration with the Department of Master of Business Administration. The seminar was attended by 57 students from both III-Year CSE-Data Science and I MBA. The objective was to provide a comprehensive overview of key concepts, tools, and techniques for web analytics, SEO, and digital marketing.

The seminar's resource person was Mr. Narsingh Patro,a Senior Area Head at Housing.Com, Hyderabad. The session was introduced by Dr. Sarika Koluguri from the Department of MBA and Mr. Bande Ganesh from the Department of CSE-Data Science. Mr. Patro covered various topics, including the fundamentals of SEO and its importance in digital marketing. He also discussed keyword planning tools like Google Keyword Planner and Ubersuggest , as well as the SEO lifecycle. Technical aspects such as
Schema Markup, Structured Data, Site Speed, Core Web Vitals, and Mobile-First Indexing were also explained with real-time examples and sample programs. The seminar also delved into
Web Analytics and Data Analytics
including traffic analysis and understanding key terminologies and data types. The use of
Google Search Console for performance reports and mobile usability was also covered. Following the lecture, Mr. Patro conducted group activities focused on using analytics for business improvement.

Impact on the students:

The seminar had a significant impact on students, equipping them with both theoretical knowledge and hands-on experience. Participants gained a clear understanding of how search engines work and the importance of SEO in digital marketing. They learned to conduct
keyword research and develop effective SEO content strategies. A key outcome was the ability to use web analytics tools to track and interpret website performance data. This enabled them to create detailed SEO and analytics reports for performance improvement and decision-making. Students also gained knowledge of digital marketing concepts. The hands-on activities on
keyword research and keyword planning tools were particularly impactful, fostering collaborative learning and practical application of the concepts discussed. The students were also introduced to technical aspects of website optimization for better crawlability and indexing. The seminar successfully provided a blend of theoretical knowledge and practical skills, preparing the students for careers in digital marketing and data-driven roles

3. A Guest Lecture on “Big data Analytics ” was conducted on 15th May 2025

A guest lecture on "Big Data Analytics" was organized by the Data Science Club in collaboration with the Department of Computer Science & Engineering - Data Science (CSD) at KG Reddy College of Engineering & Technology on May 15, 2025. The one-day event was held for III-CSE-Data Science students and saw the participation of 63 students. The objective was to provide students with knowledge of machine learning, recommendation systems, and mobile and social media analytics

The guest lecturer, Dr. Mathurya, an Assistant Professor from Vardhaman College of Engineering, Hyderabad, is a specialist in Data Analytics and Machine Learning. The session began with an introduction of the guest by the session coordinator, Mrs. K. Gomathi, Assistant Professor, Computer Science and Engineering-Data Science. Dr. Mathurya initiated the lecture with an introduction to Big Data Analytics. The topics discussed included an introduction to Data Analytics, Machine Learning, and social media analytics. She also explained the categories of supervised, unsupervised, and reinforcement learning, as well as recommendation systems and collaborative filtering. The lecture provided a detailed explanation of mobile analytics, social media analytics, and BigR.

Impact on the students:

The guest lecture had a significant impact on the students, as highlighted by the hands-on session that followed the theoretical talk. Students gained practical experience by implementing different types of supervised and unsupervised machine learning algorithms using R/Python. This hands-on experience allowed them to build a machine learning model from scratch using a given dataset. They also learned to design models using supervised, unsupervised, and reinforcement learning algorithms. The students were able to develop applications for customer and mobile analytics , as well as applications for social media analytics. Dr. Mathurya clarified their doubts while they were developing their models and applications. One of the notable impacts was the introduction to RStudio and its features, as well as the use of GitHub.

June- 2025

Students Achievements:

On behalf of the Department of Data Science, I want to extend my heartfelt congratulations to each of you on the successful completion of your certification courses. This achievement is a testament to your hard work, dedication, and unwavering commitment to mastering the complex and ever-evolving field of data science.

Over the past few months, you've delved into challenging topics, from machine learning algorithms and statistical analysis to big data technologies and data visualization. You've embraced long hours of study, tackled intricate projects, and demonstrated a remarkable ability to apply theoretical knowledge to real-world problems. This journey has not only enriched your technical skills but has also cultivated a mindset of continuous learning and problem-solving that will serve you well in your future careers. .

As you step into the next phase of your professional lives, the skills you have acquired will make you invaluable assets to any organization. The demand for skilled data professionals is at an all-time high, and you are now well-equipped to meet that demand. Your ability to extract meaningful insights from data will be crucial in driving innovation and making informed decisions in various industries.

We are incredibly proud of your accomplishments and look forward to witnessing the amazing things you will achieve. Remember that this certification is not just a piece of paper; it's a key that unlocks a world of opportunities. Keep pushing the boundaries of what's possible and continue to be a source of inspiration for future generations of data scientists.

As you step into the next phase of your professional lives, the skills you have acquired will make you invaluable assets to any organization. The demand for skilled data professionals is at an all-time high, and you are now well-equipped to meet that demand. Your ability to extract meaningful insights from data will be crucial in driving innovation and making informed decisions in various industries.

We are incredibly proud of your accomplishments and look forward to witnessing the amazing things you will achieve. Remember that this certification is not just a piece of paper; it's a key that unlocks a world of opportunities. Keep pushing the boundaries of what's possible and continue to be a source of inspiration for future generations of data scientists.

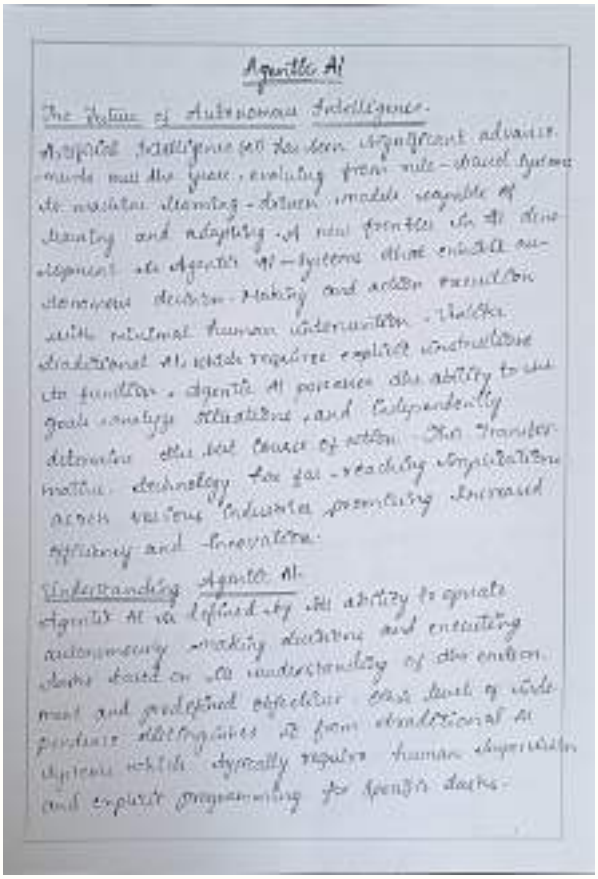
Student Articles on Advancements in Technology

NAME : D LAXMI PRASANNA
ROLL NO : 22QM1A6710
YEAR : III

Hello, I'm Prasanna, a 3rd-year BTech student specializing in Computer Science and Data Science. My passion lies in the world of Artificial Intelligence, where I explore intelligent systems capable of learning, adapting, and making decisions autonomously. I am fascinated by how AI can revolutionize industries and enhance human-computer interactions. Constantly seeking innovation, I aspire to contribute to the advancement of AI-driven technologies that can shape the future.

INTRODUCTION:

Agentic AI is a revolutionary advancement in artificial intelligence that allows systems to operate independently with minimal human intervention. Unlike traditional AI, which follows predefined rules and requires continuous oversight, Agentic AI can set its own goals, analyze complex environments, and make autonomous decisions. This self-sufficiency enables it to adapt to changing conditions, optimize processes, and improve efficiency across various domains. Industries such as software development, cybersecurity, healthcare, and customer service are increasingly adopting Agentic AI to streamline operations and enhance innovation. For instance, in software engineering, it can autonomously generate and debug code, reducing development time significantly. In cybersecurity, Agentic AI can detect and mitigate threats in real-time, enhancing digital security. Similarly, AI-powered virtual assistants in customer service can handle inquiries and resolve issues with minimal human involvement. The adaptability of Agentic AI makes it highly scalable, capable of managing large volumes of data and complex tasks without requiring proportional increases in resources. However, despite its numerous advantages, Agentic AI also presents challenges, including ethical concerns, security vulnerabilities, and regulatory complexities. Autonomous decision-making raises questions about accountability and transparency, especially in high-stakes applications like healthcare and finance. Additionally, ensuring the security of Agentic AI systems against potential cyber threats is critical to prevent misuse. As this technology continues to evolve, researchers and policymakers must work together to establish frameworks that promote responsible AI deployment. With the right safeguards in place, Agentic AI has the potential to redefine how businesses and societies leverage artificial intelligence for smarter and more efficient solutions.



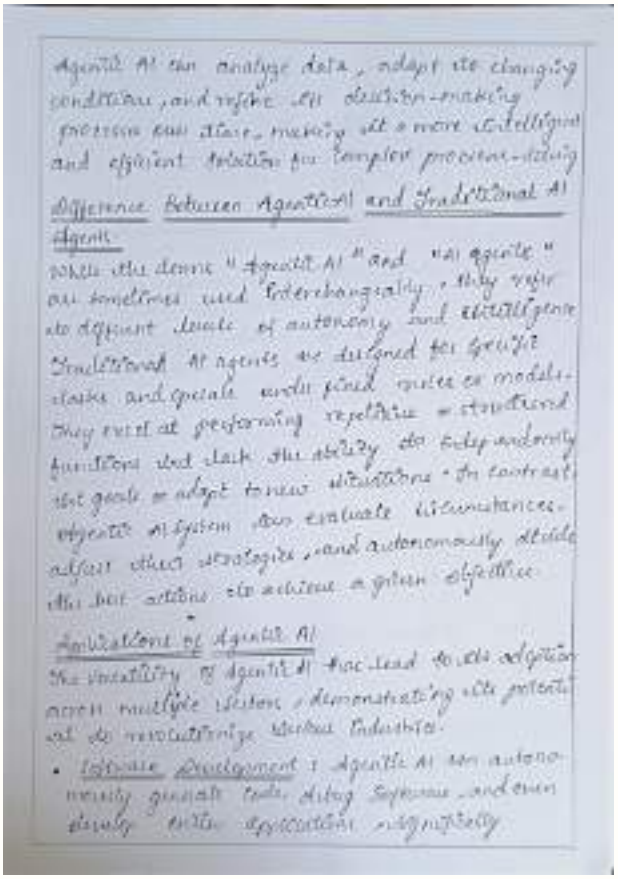
Agentic AI

The Future of Autonomous Intelligence.

Artificial intelligence (AI) has been significant advancements over the years, evolving from rule-based systems to machine learning-driven models capable of learning and adapting. A new frontier in AI development is Agentic AI—systems that exhibit autonomous decision-making and action execution with minimal human intervention. Unlike traditional AI, which requires explicit instructions for every task, Agentic AI possesses the ability to set goals, analyze situations, and independently determine the best course of action. The transformative technology has far-reaching implications across various industries, promising increased efficiency and innovation.

Understanding Agentic AI.

Agentic AI is defined by its ability to operate autonomously, making decisions and executing tasks based on its understanding of the environment and predefined objectives. This level of independence differentiates it from traditional AI systems, which typically require human supervision and explicit programming for specific tasks.



Agentic AI can analyze data, adapt to changing conditions, and refine its decision-making processes over time, making it a more intelligent and efficient solution for complex processing.

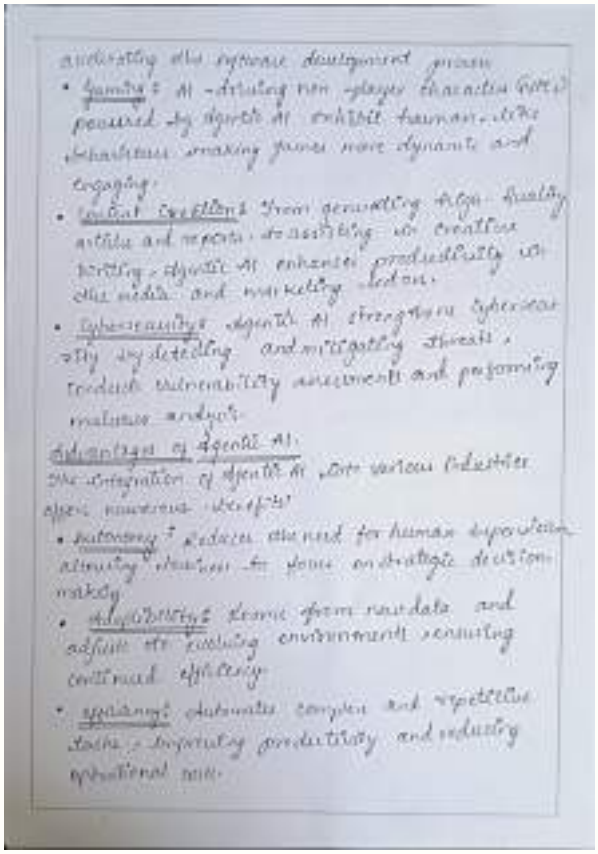
Difference Between Agentical and Traditional AI Agents

While the terms "Agentic AI" and "AI agents" are sometimes used interchangeably, they refer to different levels of autonomy and intelligence. Traditional AI agents are designed for specific tasks and operate under fixed rules or models. They excel at performing repetitive, standardized functions but lack the ability to independently set goals or adapt to new situations. In contrast, Agentic AI systems can evaluate circumstances, adjust their strategies, and autonomously decide the best actions to achieve a given objective.

Limitations of Agentic AI

The versatility of Agentic AI has led to its adoption across multiple sectors, demonstrating its potential to revolutionize various industries.

- **Software Development:** Agentic AI can autonomously generate code, debug systems, and even directly write applications, significantly



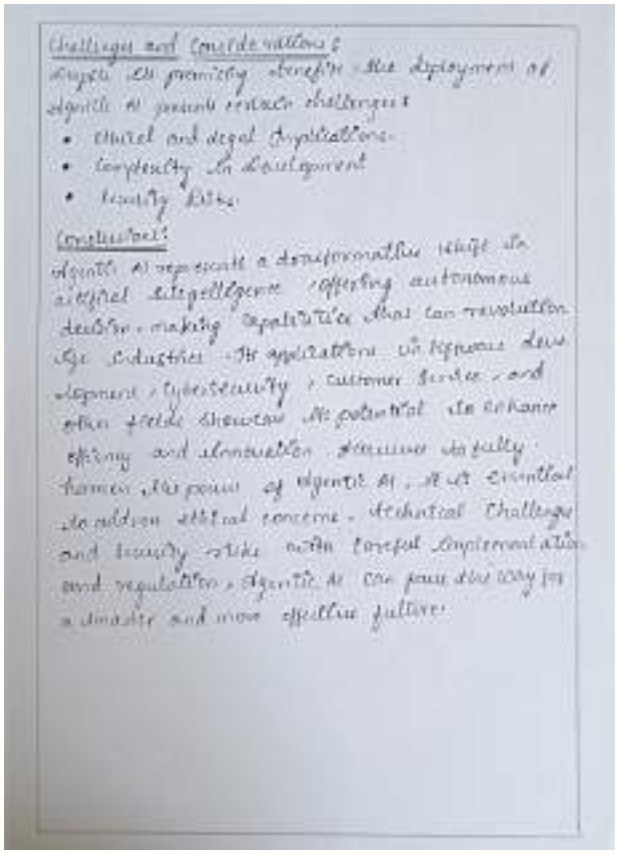
accelerating the software development process.

- **Gaming:** AI-driven non-player characters (NPCs) powered by Agentic AI exhibit human-like behaviors, making games more dynamic and engaging.
- **Content Creation:** From generating high-quality articles and reports to assisting in creative writing, Agentic AI enhances productivity in the media and marketing sectors.
- **Cybersecurity:** Agentic AI strengthens cybersecurity by detecting and mitigating threats, conducting vulnerability assessments, and performing malware analysis.

Advantages of Agentic AI:

The integration of Agentic AI into various industries offers numerous benefits:

- **Autonomy:** Reduces the need for human supervision, allowing teams to focus on strategic decision-making.
- **Adaptability:** Learns from real-time data and adjusts to evolving environments, ensuring continued efficiency.
- **Efficiency:** Automates complex and repetitive tasks, improving productivity and reducing operational costs.



Challenges and Considerations:

Despite its promising benefits, the deployment of Agentic AI presents certain challenges:

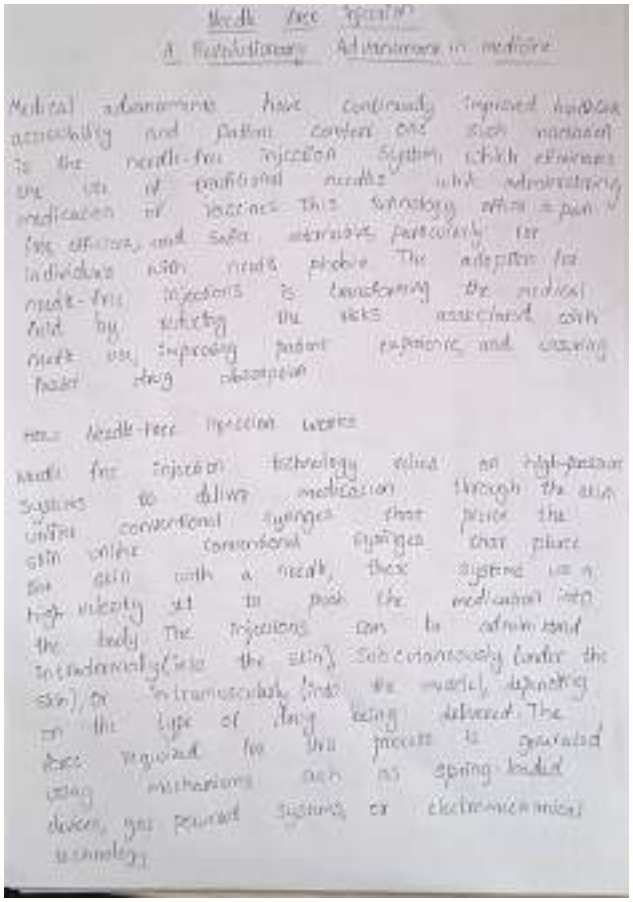
- Ethical and legal implications.
- Complexity in development.
- Security risks.

Conclusion:

Agentic AI represents a transformative leap in artificial intelligence, offering autonomous decision-making capabilities that can revolutionize industries. Its applications in business development, cybersecurity, customer service, and other fields showcase its potential to enhance efficiency and innovation. However, to fully harness the power of Agentic AI, it is essential to address ethical concerns, technical challenges, and security risks with careful implementation and regulation. Agentic AI can pave the way for a smarter and more efficient future.

NAME : SHANMUKHA SHYAM
ROLL NO : 22QM1A6754
YEAR : III

Hi, I'm Shyam, a 3rd-year Computer Science and Data Science student with a keen interest in Healthcare Technology. I believe in the power of technology to transform the medical field, making treatments more efficient, accessible, and less invasive. My curiosity drives me to explore groundbreaking medical advancements that integrate AI and data science to improve patient care. My goal is to contribute to technological innovations that redefine healthcare solutions for the betterment of society.

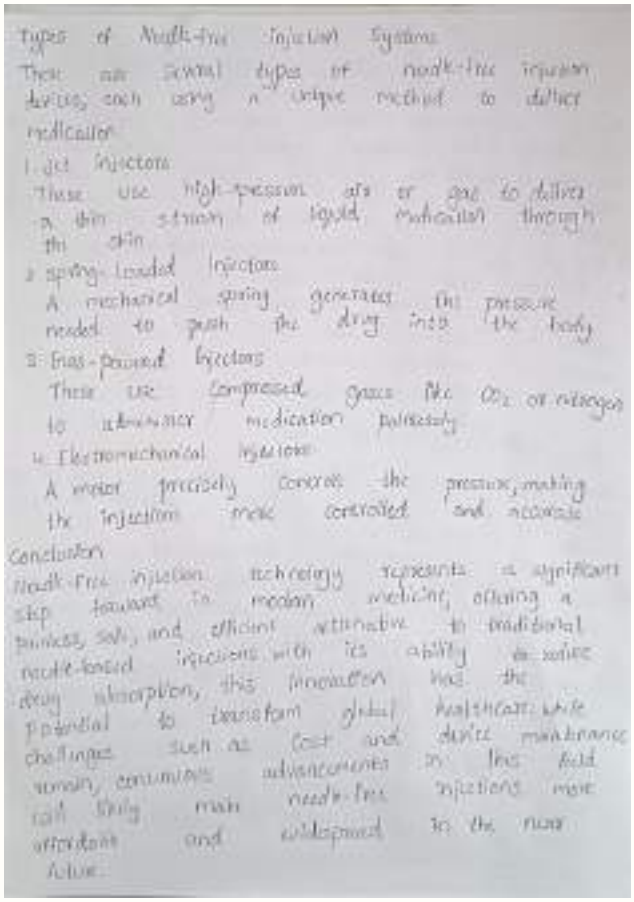


Needle-free injection
A Revolutionary Advancement in medicine

Medical advancements have continually improved healthcare accessibility and patient comfort one such innovation is the needle-free injection system which eliminates the use of traditional needles while administering medication or vaccines this technology offers a pain-free effective and safe alternative particularly for individuals with needle phobia the adoption of needle-free injections is transforming the medical field by reducing the risks associated with needle use improving patient experience and ensuring faster drug absorption

How Needle-Free Injection works

needle-free injection technology relies on high-pressure systems to deliver medication through the skin unlike conventional syringes that pierce the skin with a needle these systems use a high velocity jet to push the medication into the body the injections can be administered intradermally (into the skin) subcutaneously (under the skin) or intramuscularly (into the muscle) depending on the type of drug being delivered the force required for the process is generated using mechanisms such as spring-loaded devices gas powered systems or electromechanical technology



Types of Needle-free injection Systems

There are several types of needle-free injection devices each using a unique method to deliver medication

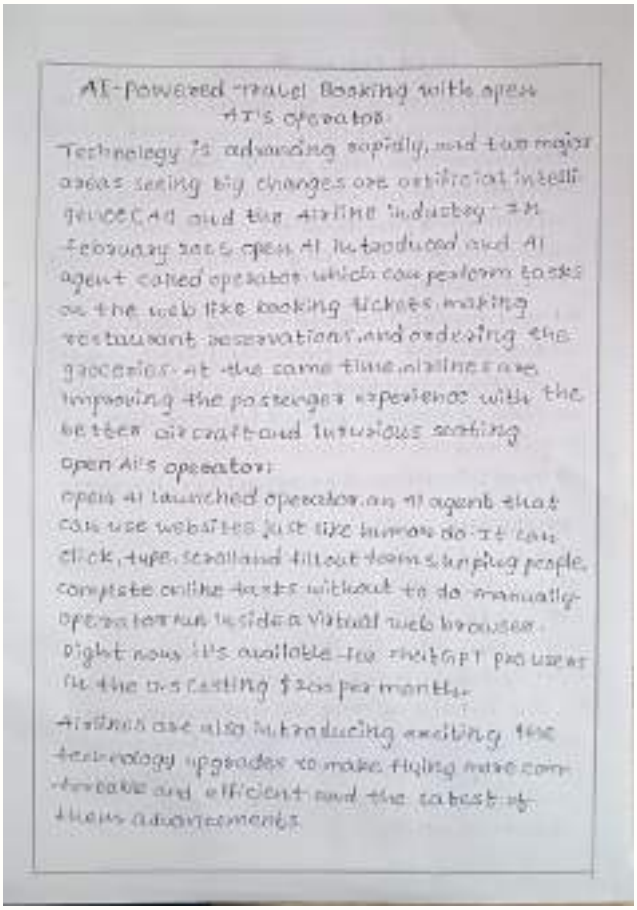
1. Jet Injectors
These use high-pressure jets of gas to deliver a thin stream of liquid medication through the skin
2. Spring-loaded Injectors
A mechanical spring generates the pressure needed to push the drug into the body
3. Gas-Powered Injectors
These use compressed gases like CO_2 or nitrogen to administer medication painlessly
4. Electromechanical Injectors
A motor precisely controls the pressure, making the injection more controlled and accurate

Conclusion

needle-free injection technology represents a significant step forward in modern medicine offering a painless safe and efficient alternative to traditional needle-based injections with its ability to improve drug absorption this innovation has the potential to transform global healthcare while challenges such as cost and device maintenance remain continuous advancements in this field can help make needle-free injections more affordable and widespread in the near future

NAME : CHILAKALA VAISHNAVI
ROLL NO : 22QM1A6708
YEAR : III

Hi, I'm Vaishnavi, a 3rd-year Computer Science and Data Science student who is deeply passionate about AI and automation. I am fascinated by how artificial intelligence can simplify complex processes, optimize efficiency, and create seamless user experiences. From predictive systems to automated workflows, I believe AI holds immense potential to revolutionize industries. My goal is to be at the forefront of AI-driven innovations that enhance convenience and productivity in everyday life.



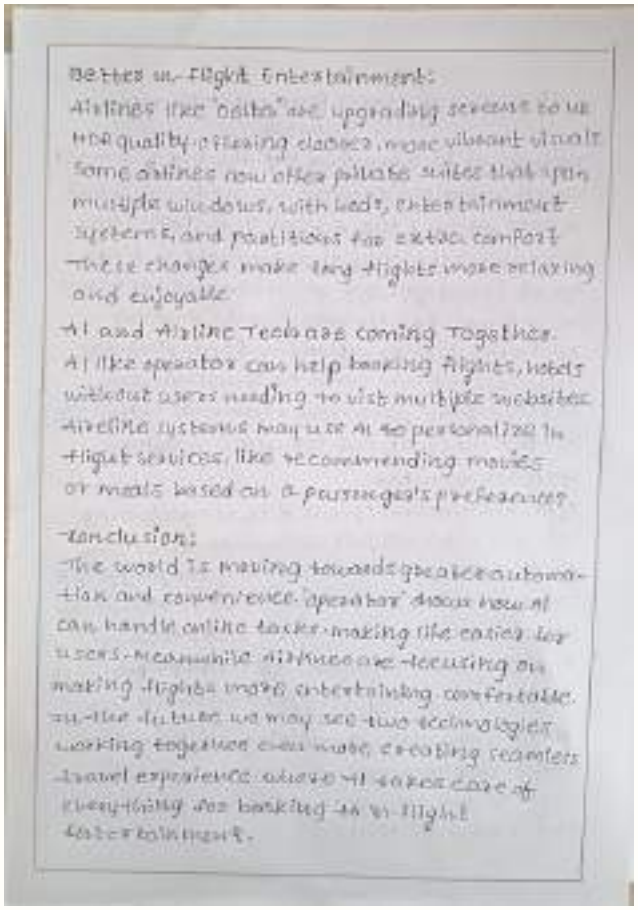
AI-powered travel Booking with open AI's operator

Technology is advancing rapidly, and two major areas seeing big changes are artificial intelligence (AI) and the airline industry. In February 2025, open AI introduced and AI agent called operator which can perform tasks on the web like booking tickets, making restaurant reservations, and ordering the groceries. At the same time, airlines are improving the passenger experience with the better aircraft and luxurious seating.

Open AI's operator:

open AI launched operator, an AI agent that can use websites just like humans do. It can click, type, scroll and fill out forms, helping people complete online tasks without to do manually. operator runs inside a virtual web browser. Right now, it's available for ChatGPT pro users in the us, costing $200 per month.

Airlines are also introducing exciting new technology upgrades to make flying more comfortable and efficient, and the latest of these advancements



Better in-flight Entertainment:

Airlines like Delta are upgrading screens to ultra high quality, crystal clear, more vibrant visuals. Some airlines now offer private suites that open multiple windows, with beds, entertainment systems, and partitions for extra comfort. These changes make long flights more relaxing and enjoyable.

AI and Airline Tech are coming Together.

AI like operator can help booking flights, hotels without users needing to visit multiple websites. Airline systems may use AI to personalize in-flight services, like recommending movies or meals based on a passenger's preferences.

Conclusion:

The world is moving towards greater automation and convenience. operator shows how AI can handle online tasks, making life easier for users. Meanwhile, airlines are focusing on making flights more entertaining, comfortable. In the future, we may see two technologies working together even more, creating seamless travel experience where AI takes care of everything, for booking to in-flight entertainment.

NAME : KOMARAGIRI PHANITHA
ROLL NO : 22QM1A6754
YEAR : III

Hey there, I'm Phanitha, a 3rd-year BTech student specializing in Computer Science and Data Science. My interest lies in next-generation communication technologies that can revolutionize connectivity across the globe. From ultra-fast networks to intelligent infrastructure, I am eager to explore how technology can bridge gaps and enhance global digital transformation. I am passionate about contributing to the evolution of future communication systems that will drive innovation in various fields.

INTRODUCTION:

The future of wireless communication is set to be transformed with the arrival of 6G technology, promising ultra-fast speeds, near-instantaneous connectivity, and seamless global communication. As the successor to 5G, 6G aims to deliver data rates of up to 1 terabyte per second (Tbps), making it exponentially faster while significantly reducing latency to under a microsecond. This next-generation network will integrate advanced technologies such as artificial intelligence (AI), machine learning, and edge computing to create intelligent, self-optimizing systems. By leveraging terahertz (THz) frequency bands, 6G will enable high-speed data transfer, though overcoming signal attenuation challenges remains a key focus. The technology is expected to revolutionize industries by supporting applications such as immersive augmented and virtual reality, real-time remote surgeries, and fully autonomous transportation systems. With the expansion of smart cities and the Internet of Things (IoT), billions of interconnected devices will communicate seamlessly, optimizing urban infrastructure and industrial automation. Moreover, 6G's ability to integrate terrestrial and satellite networks will ensure uninterrupted coverage, even in remote and underserved areas. However, several challenges must be addressed, including high infrastructure costs, increased energy consumption, and complex security and privacy concerns. Standardization and regulatory policies will play a crucial role in ensuring global compatibility and successful deployment. Tech giants like Nokia, Huawei, and Ericsson, along with government research initiatives, are actively working towards developing 6G frameworks. If implemented effectively, 6G has the potential to redefine connectivity, enhance digital transformation, and drive global innovation, making the world more interconnected than ever before.

The Future of 6G Technology

6G, the sixth generation wireless communication standard, represents the next advancement in mobile technology, promising unprecedented speeds, ultra-low latency and enhanced global connectivity. Expected to be commercially available around 2030, 6G will build on the foundation laid by 5G, integrating cutting-edge technologies such as artificial intelligence (AI), machine learning, and edge computing to create an intelligent and responsive digital ecosystem.

Key Features and Technologies

6G is projected to deliver data rates of up to 1 terabyte per second (Tbps), making it approximately 1000 times faster than 5G. Latency is expected to decrease to less than one microsecond, facilitating real-time communication and processing. The key technological leap in 6G will come from the use of higher frequency bands, including terahertz (THz) waves, which allow for faster data transmission but present new engineering challenges related to signal attenuation and propagation.

6G will offer enhanced global connectivity by integrating terrestrial networks with satellite communication and high-altitude platforms. This will provide consistent network coverage even in remote and rural areas, ensuring that no location is left without access to high-speed communication.

Applications

1. Immersive Technologies: 6G will revolutionize virtual reality (VR), augmented reality (AR), and mixed reality (MR) experiences by enabling high-resolution, real-time interactions with minimal lag.

2. Healthcare: Real-time data transmission will support advanced telemedicine, including remote surgeries and continuous patient monitoring.

3. Smart Cities and IOT: Billions of interconnected devices will share real-time data to improve urban infrastructure, traffic management, and environmental monitoring.

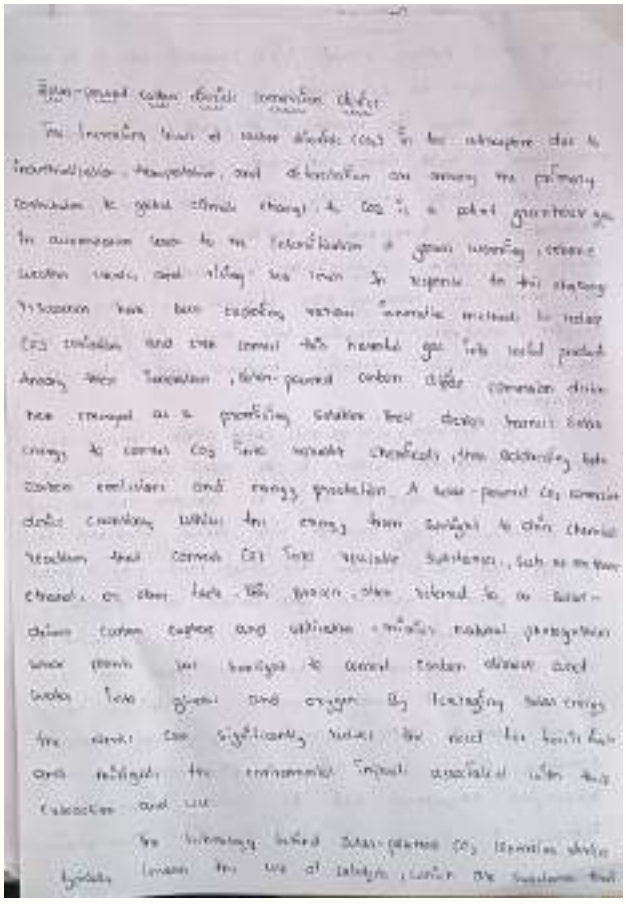
4. Autonomous Vehicles: Faster communication between vehicles and infrastructure will enable safer and more efficient autonomous transportation systems.

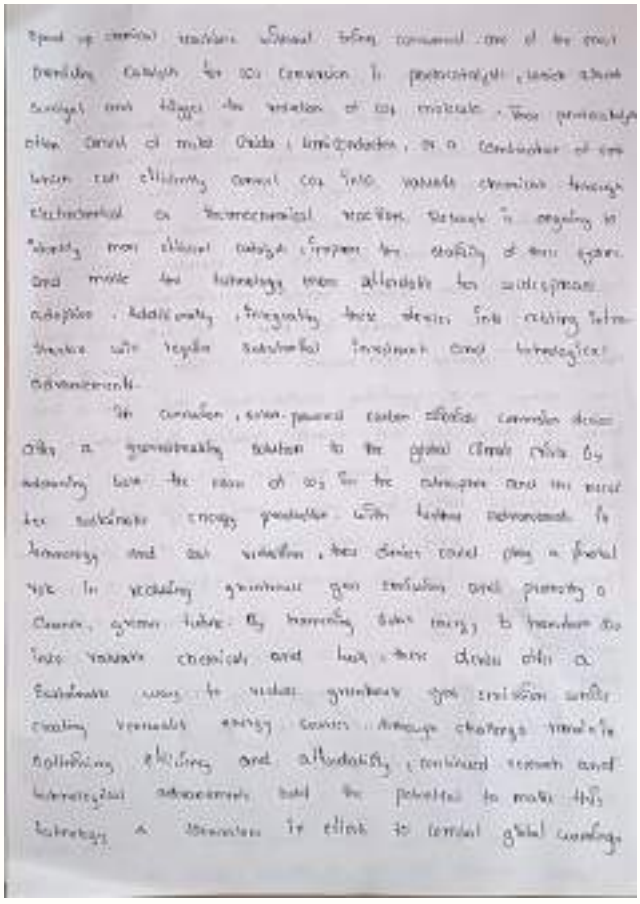
5. Industrial Automation: Enhanced machine-to-machine communication and predictive maintenance using AI will drive the next wave of industrial automation and smart manufacturing.

6G represents a groundbreaking advancement in wireless communication, combining high-speed connectivity, AI-driven intelligence, and global coverage. While significant technical and financial challenges remain, the successful deployment of 6G is expected to drive innovation across industries and improve the overall quality of life. By addressing infrastructure costs, energy consumption, and security concerns, 6G has the potential to redefine the digital landscape and create a more connected and intelligent world.

NAME : KASARLA SANDEEP
ROLL NO : 23QM1A6726
YEAR : II

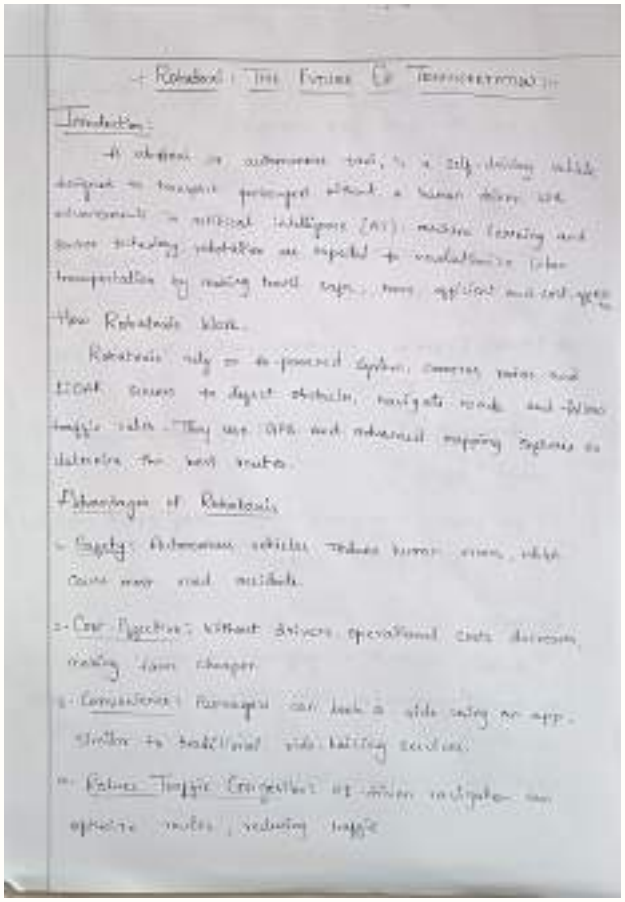
Hello, I'm Sandeep, a 2nd-year BTech student pursuing Computer Science and Data Science. My passion lies in sustainable technology and the development of green energy solutions that can combat environmental challenges. I am particularly interested in integrating data science with renewable energy innovations to create smarter, eco-friendly alternatives. I strive to work on projects that contribute to a cleaner, more sustainable future through technological advancements.





NAME : SUBRAT KUMAR MALIK
ROLL NO : 23QM1A6751
YEAR : II

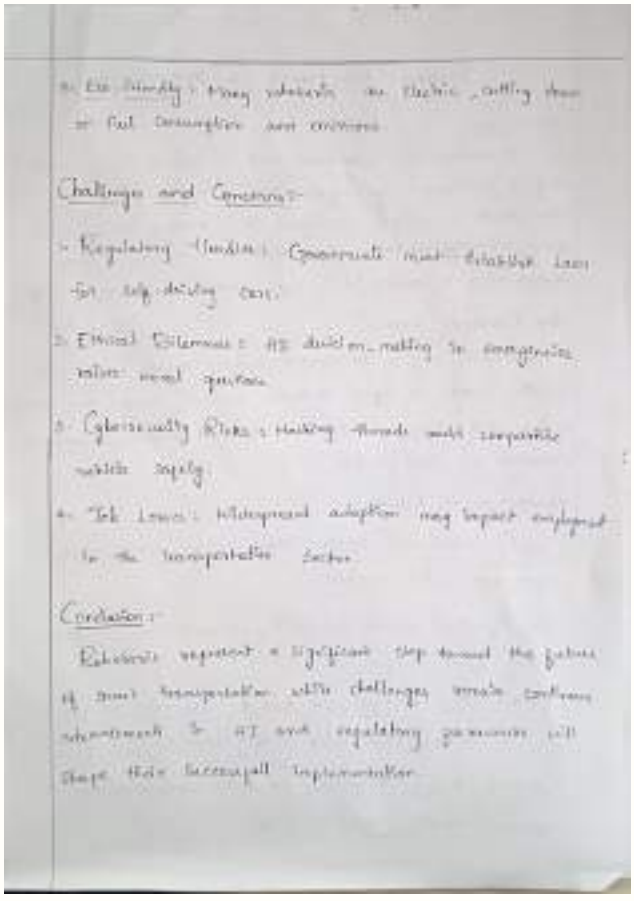
Hey, I'm Kumar, a 2nd-year student in Computer Science and Data Science, with a strong interest in autonomous systems and robotics. I am captivated by the idea of intelligent machines seamlessly interacting with the world, making transportation, logistics, and daily tasks more efficient. The fusion of AI, automation, and robotics excites me, and I aspire to contribute to the development of self-sustaining, smart technologies that redefine mobility and automation.



Introduction:

How Robotaxis Work:

Challenges of Robotaxis:



Challenges and Concerns:

Conclusion:

NAME : V.Varsha
ROLL NO : 23QM1A6761
YEAR : III

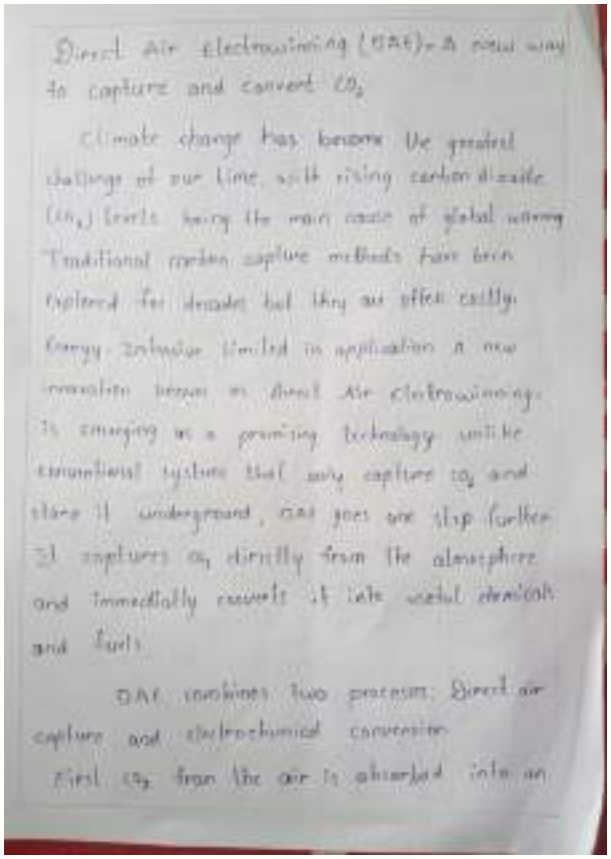
Hi, I'm Varsha, a 3rd-year Data Science student with a strong interest in sustainable technologies and renewable energy solutions. I am passionate about exploring innovations that address global challenges such as climate change, clean energy, and eco-friendly fuels. My goal is to use the power of data science and modern technology to contribute towards creating greener, more efficient, and impactful solutions for society.

Introduction

The NiZn Catalyst: A Revolutionary Approach to Methanol Production 💡
The NiZn catalyst is a groundbreaking innovation that converts carbon dioxide (CO_2) into methanol using only sunlight. This discovery is a significant step towards a sustainable fuel supply and a circular, renewable energy economy

The catalyst is a combination of Nickel (Ni) and Zinc oxide (ZnO). It operates through a solar photothermal process, absorbing both sunlight and heat to drive chemical reactions. A key advantage is that it functions at normal pressure and temperature, unlike traditional methods that require expensive, high-pressure reactors.

cost of producing and maintaining these catalysts needs to be reduced. Despite these challenges, the future outlook for the NiZn catalyst is bright. It has the potential to replace traditional methanol production methods that rely on natural gas, significantly cutting emissions and paving the way for a solar-powered chemical industry

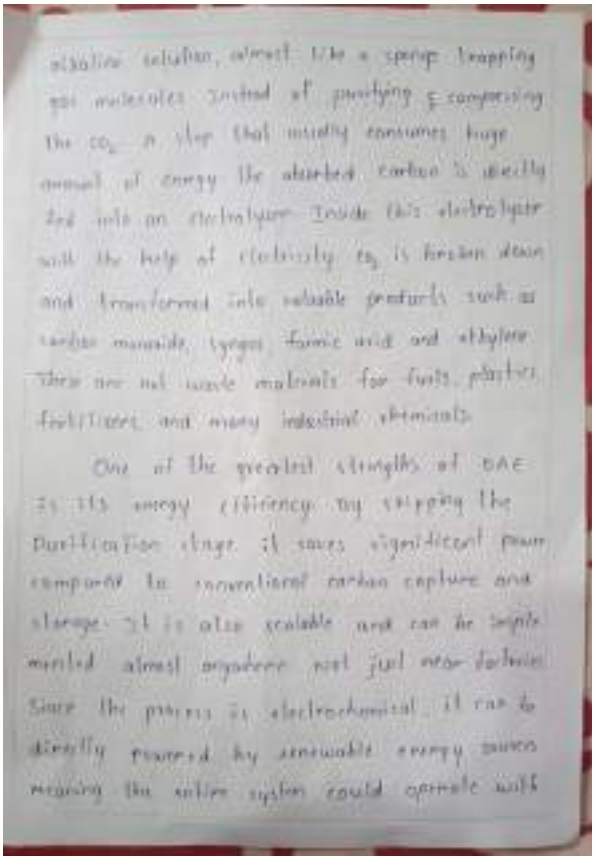


Direct Air electrowinning (DAE)- A new way to capture and convert CO_2

Climate change has become the greatest challenge of our time, with rising carbon dioxide (CO_2) levels being the main cause of global warming. Traditional carbon capture methods have been explored for decades but they are often costly. Energy intensive, limited in application. A new innovation known as direct Air electrowinning is emerging as a promising technology unlike conventional systems that only capture CO_2 and store it underground, DAE goes one step further. It captures CO_2 directly from the atmosphere and immediately converts it into useful chemicals and fuels.

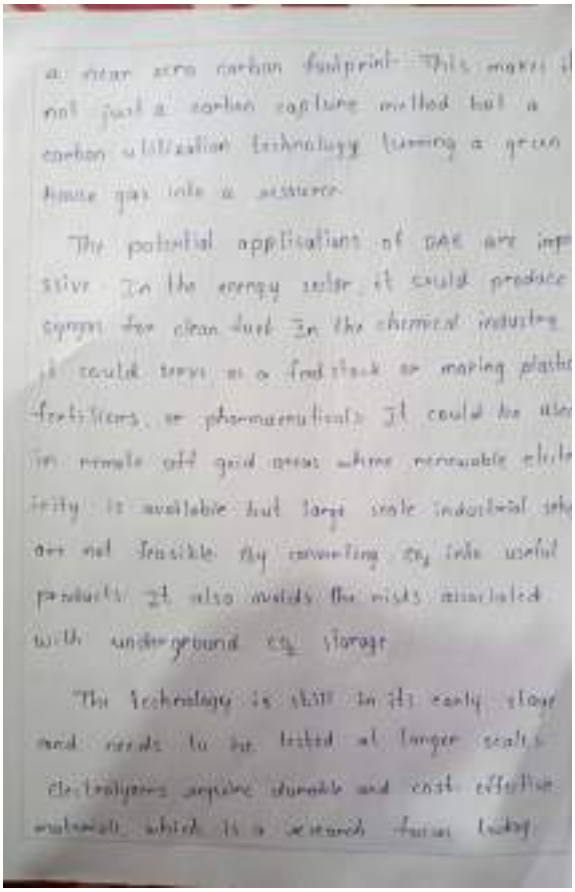
DAE combines two processes: Direct air capture and electrochemical conversion.

First, CO_2 from the air is absorbed into an



alkaline solution, almost like a sponge trapping gas molecules. Instead of purifying & compressing the CO_2, a step that usually consumes huge amount of energy, the absorbed carbon is directly fed into an electrolyzer. Inside this electrolyzer with the help of electricity CO_2 is broken down and transformed into valuable products such as carbon monoxide, syngas, formic acid and ethylene. These are not waste materials for fuels, plastics, fertilizers and many industrial chemicals.

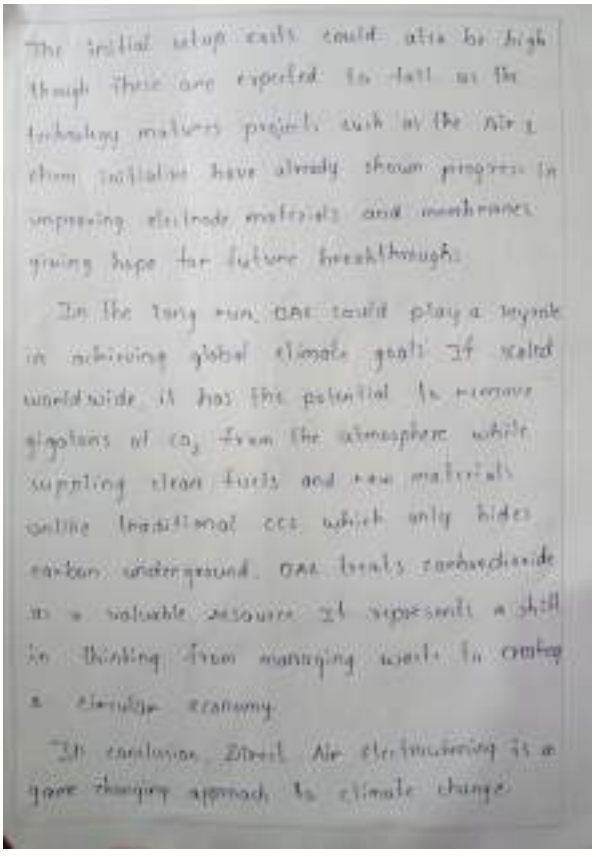
One of the greatest strengths of DAE is its energy efficiency by skipping the purification stage, it saves significant power compared to conventional carbon capture and storage. It is also scalable and can be deployed almost anywhere, not just near factories. Since the process is electrochemical, it can be directly powered by renewable energy sources meaning the entire system could operate with



a near zero carbon footprint. This makes it not just a carbon capture method but a carbon utilization technology, turning a greenhouse gas into a resource.

The potential applications of DAE are impressive. In the energy sector, it could produce synfuels for clean fuel. In the chemical industry, it could serve as a feedstock for making plastics, fertilizers, or pharmaceuticals. It could be used in remote off grid areas where renewable electricity is available but large scale industrial setups are not feasible by converting CO_2 into useful products. It also avoids the risks associated with underground CO_2 storage.

The technology is still in its early stages and needs to be tested at larger scales. Electrolyzers require durable and cost effective materials, which is a research focus today.



The initial setup costs could also be high though these are expected to fall as the technology matures. Projects such as the Air 2 Chem initiative have already shown progress in improving electrode materials and membranes, giving hope for future breakthroughs.

In the long run, DAE could play a major role in achieving global climate goals. If scaled worldwide, it has the potential to remove gigatons of CO_2 from the atmosphere while supplying clean fuels and raw materials, unlike traditional CCS which only hides carbon underground. DAE treats carbon dioxide as a valuable resource. It represents a shift in thinking from managing waste to creating a circular economy.

In conclusion, Direct Air electrowinning is a game changing approach to climate change.

NAME : V.Praneeth
ROLL NO : 23QM1A6754
YEAR : III

Hi, I'm Praneeth, a 3rd-year Data Science student with a strong interest in climate-friendly technologies and innovative energy solutions. I am passionate about exploring new approaches to reduce greenhouse gas emissions and transform CO_2 into valuable resources. My curiosity drives me to learn how data science and modern technology can support sustainable energy, environmental protection, and global climate goals. My aim is to contribute towards solutions that create a cleaner, greener, and more sustainable future.

KG REDDY College of Engineering & Technology
AN AUTONOMOUS INSTITUTION

DATA SCIENCE CLUB

Faculty Coordinator:

Mrs. K.Gomathi
Assistant Professor
gomathi.k@ kgr.ac.in

The Data Science Club is a vibrant platform that fosters learning, innovation, and collaboration among students passionate about data science. It provides a structured environment where students can explore emerging technologies, gain hands-on experience, and develop analytical thinking. Through various technical activities, the club bridges the gap between academic learning and real-world applications, ensuring students are well-prepared for industry challenges.

One of the key aspects of the club is its focus on experiential learning. By engaging in workshops, research discussions, and practical projects, students acquire valuable skills in data analysis, machine learning, artificial intelligence, and more. The club also provides opportunities to participate in hackathons and competitions, enabling students to apply their knowledge in a competitive and innovative setting.

Collaboration is at the heart of the club's initiatives. It encourages teamwork by connecting students with industry experts, faculty mentors, and like-minded peers. Guest lectures, industry visits, and networking sessions provide valuable insights into the latest trends and career opportunities in data science. These interactions help students gain a broader perspective and prepare for their professional journeys.

As faculty coordinators, we are committed to supporting and guiding students in their academic and professional growth. We encourage every student to actively participate, take advantage of the opportunities available, and contribute to the club's success. By fostering curiosity, critical thinking, and technical excellence, the Data Science Club aims to shape future leaders in the evolving world of data science.

"With a strong foundation in learning, collaboration, and innovation, the Data Science Club continues to empower students to excel in this dynamic field. By embracing opportunities, engaging in meaningful experiences, and applying their knowledge, students can pave the way for a successful future in data science. Together, we strive to build a thriving community that drives progress and shapes the next generation of data-driven professionals."

KG REDDY College of Engineering & Technology
AN AUTONOMOUS INSTITUTION

DATA SCIENCE CLUB

Club Members:

President : Rajith Padma

As the President of the Data Science Club, I had the privilege of leading a dedicated team in organizing workshops, seminars, and networking events to enhance students' knowledge of data science. I worked closely with faculty, industry professionals, and student organizations to create valuable learning opportunities, including hackathons and training sessions. This role helped me develop key leadership, communication, and organizational skills while deepening my understanding of data science.

Vice President : Siri Kolluru

Being the Vice President, I ensure the seamless execution of events through strategic time management, meticulous planning, and efficient coordination. I also oversee record-keeping and maintaining detailed documentation of events and insights for continuous improvement. Our initiatives bridge the gap between theory and real-world applications. I encourage everyone to embrace challenges, explore new possibilities, and make the most of every opportunity in data science.

Secretary : Pattargatti Sneha

Serving as the Secretary of the Data Science Club, I managed communication, maintained club records, and organized meetings. I played a key role in supporting event planning and ensuring the efficient handling of administrative tasks. This experience allowed me to develop strong organizational, communication, and time-management skills, contributing significantly to the club's overall success.

Treasurer : Akula Vaishnavi

Head of Operations : K Praveen Kumar Reddy

Head of Documentation : Pallakurthi Mahesh

Head of Social Media : Neela Vaishnavi

Head of Publicity : Dongari Venu

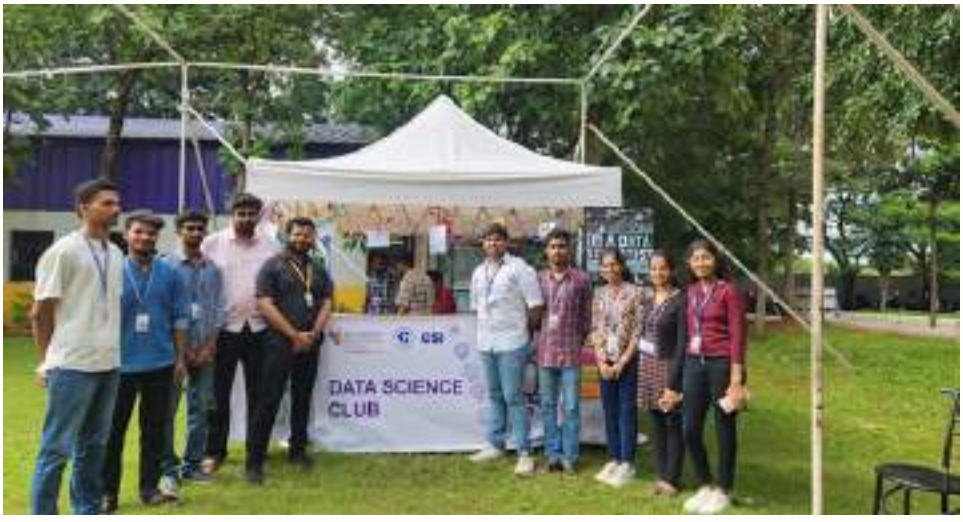
Head of Publicity : Uppari Srikanth

ACTIVITIES

Registration Drive conducted on 22nd August 2024:

The membership drive successfully engaged second-year B.Tech students by effectively showcasing the numerous benefits and opportunities available through active participation in the Data Science Club. Through engaging presentations and interactive discussions, the drive highlighted the club's past projects, real-world applications of data science, and the diverse range of skills developed through involvement. These efforts were designed to emphasize the club's potential in fostering both academic and professional growth, providing students with a platform to enhance their technical abilities and gain invaluable hands-on experience.

In addition, the drive provided an in-depth overview of the club's comprehensive second-year plan, which includes a series of workshops, guest lectures, and collaborative projects designed to equip students with practical knowledge and experience in data science. The plan also emphasized opportunities for networking with industry professionals, securing internships, and engaging in research collaborations. By aligning the club's offerings with students' academic and career goals, the drive aimed to inspire and motivate them to actively participate in the club's activities, fostering a sense of community and encouraging continuous learning and skill development in the evolving field of data science.



Workshop on Python Programming conducted on 30th August 2024:

The Python programming session was highly effective in providing students with a solid understanding of the core concepts of Python. By covering fundamental topics such as syntax, variables, data types, loops, and functions in a clear and structured manner, the session laid a strong foundation for students to build upon. The step-by-step explanations ensured that each concept was thoroughly understood, allowing students to develop a clear understanding of how Python works and how to apply these basic elements to create simple programs.

Moreover, the interactive Q&A session was instrumental in reinforcing the learning experience. It provided students with the opportunity to address any confusion or uncertainties, allowing them to receive personalized clarification on specific topics. This open exchange not only helped solidify their understanding but also encouraged students to engage more deeply with Python, inspiring them to explore the language further. The session's hands-on approach and supportive learning environment helped boost students' confidence in programming, motivating them to apply their newly acquired skills to more complex projects and further their studies in Python and programming in general.

Impact on the students:

The Python programming session had a significant impact on students by providing a strong foundation in core concepts such as syntax, variables, data types, loops, and functions. The clear and structured teaching approach enabled students to confidently apply these concepts in practical scenarios. The interactive Q&A session further reinforced their learning by allowing students to clarify doubts and deepen their understanding. As a result, students gained both technical proficiency and the confidence to explore more advanced topics, motivating them to continue developing their Python skills for future academic and professional growth.

Registration Drive conducted on 10th September 2024:

The membership drive was highly successful in engaging first-year B.Tech students by effectively showcasing the numerous benefits and opportunities associated with joining the Data Science Club. The drive presented a detailed overview of the club's past achievements, emphasizing successful projects, collaborative efforts, and the practical skills students gained through involvement. By sharing firsthand learning experiences, the session highlighted the club's role in bridging the gap between academic theory and real-world applications of data science.

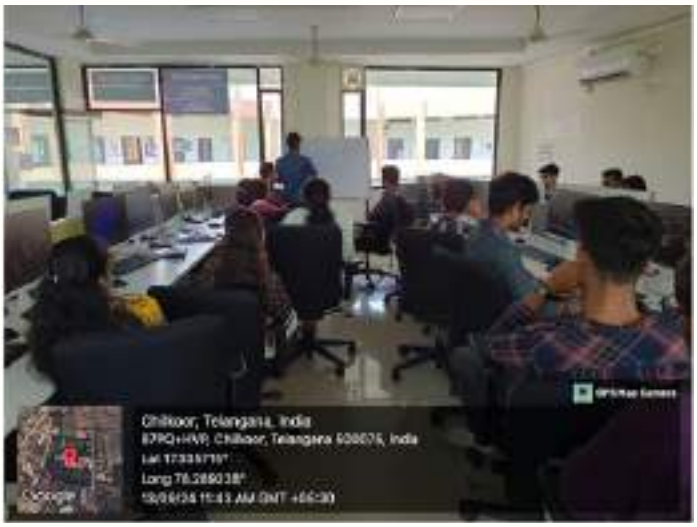
In addition, the drive outlined the comprehensive first-year plan, which included a series of workshops, skill-building sessions, and hands-on projects designed to equip students with foundational knowledge in data science. The plan also highlighted networking opportunities with industry professionals, guest lectures, and access to resources that would enhance their learning experience. This thorough approach aimed not only to inform but to inspire and motivate students, fostering a sense of community and encouraging active participation in the club's activities. By aligning the club's offerings with the academic and professional goals of the students, the drive positioned the Data Science Club as a valuable platform for personal and career development, motivating first-year students to embark on a journey of continuous learning and growth in the field of data science.

Workshop on OOPs Concepts, Python Patterns, and Introduction to NumPy conducted on 13th September:

The session successfully introduced students to key concepts in Object-Oriented Programming (OOP), Python design patterns, and the widely used NumPy library, providing them with a comprehensive foundation in these essential areas of programming. Through detailed explanations and real-world examples, students were guided through the core principles of OOP, including classes, objects, inheritance, and polymorphism, enabling them to understand how to structure and manage code efficiently. Additionally, the session explored Python design patterns, which are critical for writing scalable, maintainable, and efficient code. Students were able to recognize the practical applications of these patterns in real-world projects, further enhancing their coding proficiency.

The hands-on lab sessions played a pivotal role in reinforcing the theoretical knowledge, offering students the opportunity to directly apply what they had learned in practical exercises. By working on real-time problems, students gained valuable experience using Python and NumPy to implement solutions, analyze data, and optimize code.

This combination of theoretical instruction and hands-on practice helped students not only grasp the technical concepts but also gain the confidence to implement them in future programming projects.



Impact on the students:

The session had a strong impact on students by enhancing their understanding of Object-Oriented Programming (OOP), Python design patterns, and the NumPy library. The practical labs allowed students to apply these concepts directly, reinforcing their knowledge and boosting their confidence in writing efficient, scalable code. By learning to work with OOP principles and NumPy for data manipulation, students gained valuable skills that will aid them in tackling more advanced programming challenges in the future. Additionally, the hands-on experience provided students with a deeper insight into the practical applications of these concepts, motivating them to continue developing their programming skills and pursue more complex projects in software development and data science.

Workshop On Numpy , Pandas and Machine Learning Algorithms conducted on 13th & 14th September:

The two-day session was highly successful in providing third-year students with an in-depth understanding of the NumPy and Pandas libraries, which are essential for effective data manipulation, cleaning, and analysis. Through detailed theoretical explanations and practical exercises, students were introduced to the powerful capabilities of these libraries, enabling them to efficiently work with large datasets and perform data preprocessing tasks crucial for machine learning applications.

In addition to these foundational tools, the session also covered essential machine learning algorithms, including linear regression, lasso regression, and ridge regression. These algorithms, key to predictive modeling and statistical analysis, were explored through both theoretical discussions and hands-on coding exercises. This dual approach ensured that students not only grasped the underlying mathematical concepts but also gained practical experience in implementing these algorithms using Python. By combining theory with real-world applications, the session provided students with a solid foundation in data science and machine learning, preparing them for more advanced topics and projects in these rapidly evolving fields.

This learning experience has sparked their curiosity and equipped them with the tools needed to explore data science further and apply these techniques in future academic and professional pursuits.

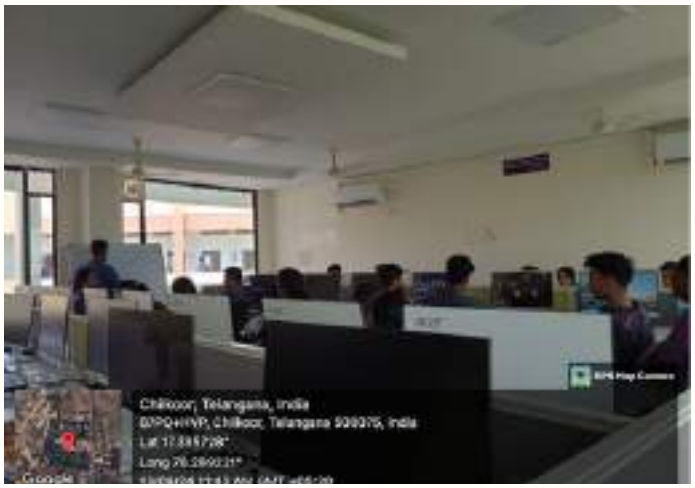
Moreover, the session emphasized the importance of model evaluation, with students gaining insights into how to assess the performance of machine learning models using techniques such as cross-validation and regularization. These critical concepts ensure that students are equipped not only with the ability to build models but also with the knowledge to optimize and fine-tune them for better results. The hands-on exercises, paired with real-world data sets, allowed students to experiment with different approaches and understand the practical implications of the techniques they learned.

Additionally, the collaborative nature of the session allowed students to engage with their peers, encouraging the exchange of ideas and problem-solving strategies. This interaction fostered a sense of community and teamwork, crucial for future endeavors in both academic research and professional data science environments.

By the end of the session, students were not only able to implement basic machine learning algorithms but also gained a deeper understanding of the broader data science workflow, from data preprocessing to model evaluation. This comprehensive learning experience has laid a strong foundation for their continued exploration of data science and machine learning, motivating them to pursue further academic research, internships, or career opportunities in these exciting and rapidly growing fields.

Impact on the students:

The session had a profound impact on the students, significantly enhancing their understanding of essential data science and machine learning concepts. By mastering the NumPy and Pandas libraries, students gained practical skills in data manipulation, cleaning, and analysis, which are vital for working with large datasets. This knowledge has not only increased their technical proficiency but also made them more confident in handling complex data science tasks. Furthermore, the focus on model evaluation and optimization equipped students with the knowledge to assess and improve their models, which is crucial in the real world. The collaborative environment fostered peer-to-peer interaction, enabling students to share insights, collaborate on problem-solving, and enhance their teamwork skills—valuable in both academic and professional settings.



Overall, the session ignited a curiosity for deeper exploration of data science, motivating students to continue learning and apply the concepts in internships, academic research, or future career opportunities. It also broadened their perspective on potential career paths within the field, from data analysis to machine learning engineering, inspiring them to pursue further specialization in these areas. The experience has laid a strong foundation for their future success, providing them with both the practical and theoretical knowledge necessary to excel in the rapidly evolving fields of data science and machine learning.

Workshop on Introduction to Data Science & Python conducted on 4th October 2024:

The "Introduction to Data Science & Python Basics" workshop for first-year students was a resounding success, providing participants with a solid foundation in essential programming concepts and the fundamentals of data science. By covering key Python basics, including syntax, data types, variables, and functions, students gained the technical skills necessary to begin their journey into programming. The introduction to data science concepts further equipped them with the knowledge to understand the significance of data and its potential applications across various fields.

Through a blend of theoretical discussions and hands-on coding exercises, the workshop ensured that students not only grasped the core concepts but also gained practical experience in applying them. This approach sparked curiosity and excitement about the potential of data science, motivating students to pursue further learning in this rapidly growing field.

Impact on the students:

This concepts inspired students to appreciate the importance of data and its applications in solving real-world problems. By seeing how Python can be used for data manipulation and analysis, students gained a deeper understanding of the potential of data science as a field. The workshop also sparked curiosity and enthusiasm, motivating students to explore more advanced topics and continue developing their programming and data science skills. Overall, the session not only enhanced their technical proficiency but also ignited a passion for learning and exploring the vast opportunities within the world of data science.This workshop not only introduced students to the critical concepts of data science but also inspired them to recognize the profound impact data can have in solving real-world challenges.

IKARUS National Technical Fest 2024:

IKARUS, a premier state-level technical fest organized by the Student Council of KGRCET's Department of Student Council. Established in 2022, IKARUS aims to provide an exceptional platform for B.Tech students to showcase their technical acumen, foster innovation, and excel in their chosen fields. As an event that celebrates the spirit of technological advancement, IKARUS is committed to nurturing the next generation of engineers, problem-solvers, and visionaries.

At IKARUS, we believe in cultivating a culture of technical excellence and innovation. Our fest brings together a diverse array of clubs that cater to various domains, offering students the opportunity to explore and deepen their expertise in areas such as Artificial Intelligence, Data Science, App and Web Development, Blockchain, 3D Printing, Electric Vehicles, Internet of Things (IoT), and Green Construction, among others. Each club serves as a hub for knowledge exchange, enabling students to engage with like-minded peers, collaborate on projects, and delve deeper into their respective areas of interest.

Through a series of workshops, competitions, and interactive sessions, IKARUS provides a dynamic and conducive environment for students to enhance their technical proficiency, develop critical skills, and stay abreast of the latest trends and developments in their fields. Whether you are participating in challenging coding contests, robotics competitions, or brainstorming sessions, or you are gaining hands-on experience through various workshops, IKARUS offers a comprehensive platform for learning, growth, and networking.

This fest is not just about showcasing talent, but also about fostering a collaborative spirit, challenging conventional thinking, and pushing the boundaries of what is possible. Together, we aim to inspire and empower the next generation of technology leaders, shaping the future of innovation and driving meaningful impact in the world.


I'M A DATA
SCIENTIST
I TURN BORING INFO INTO
TOTAL
AWESOME


DATA
SCIENCE


TOGETHER
we can do
ANYTHING!


WITHOUT
DATA
YOU'RE JUST
ANOTHER
PERSON WITH
AN OPINION


EAT
ANALYZE
DATA
SLEEP
REPEAT


Making
Sense
Out of
Chaos"

Events Conducted :

1. BINARY BRAINS

Objective: "Binary Brains" introduces first-year students to fundamental data science and Python programming concepts through two progressively challenging rounds.

- Round 1: A multiple-choice quiz on data science basics and introductory Python programming, designed to build confidence in students' knowledge.
- Round 2: Students engage in error-identification tasks in Python code, focusing on debugging with conditional statements and loops, emphasizing logical thinking and problem-solving.

2. CODE CRUSADE

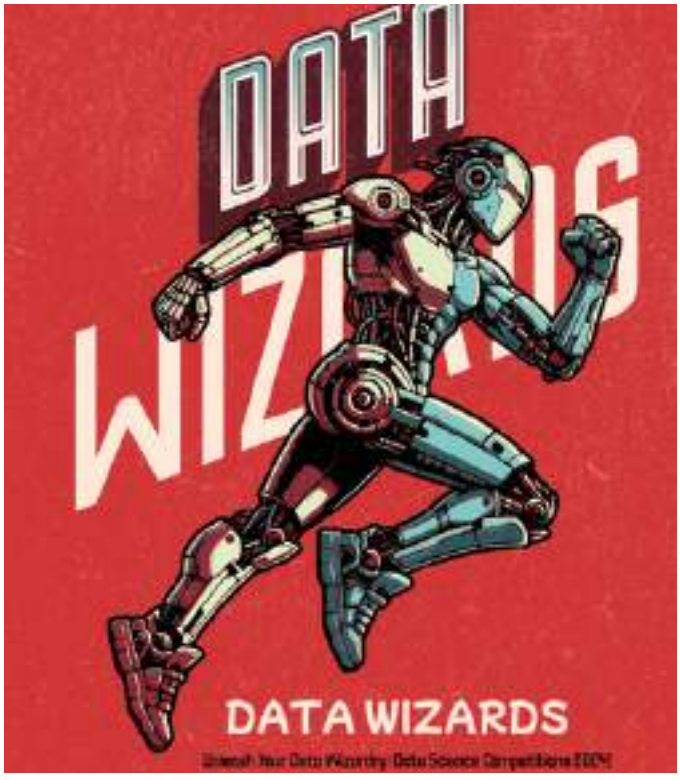
Objective: Designed exclusively for Second-year students, “Code Crusade” allows participants to demonstrate proficiency in coding patterns and business intelligence (BI) tools. This two-round event encourages both technical rigor and creativity.

- Round 1: Students write Python code to generate and display specified patterns, showcasing their understanding of loops, logic, and structural coding.
- Round 2: Participants create dashboards in Power BI using datasets provided in Excel format, applying skills in data analysis, visualization, and BI.

3. DATA WIZARDS

Objective: "Data Wizards" challenges third-year students in coding, data analysis, and data visualization with two rounds designed to test their advanced problem-solving abilities.

- Round 1 - Code Identification and Rearrangement: Students rearrange jumbled code snippets into functional programs, testing their understanding of syntax, logic, and structure.
- Round 2 - Data Diving and Visualization Voyage, where they analyzed complex datasets to extract meaningful insights and presented their findings through impactful visualizations. The third-year students particularly stood out, showcasing exceptional data storytelling skills by creating clear, engaging visualizations that effectively communicated their insights. Their work demonstrated advanced proficiency in both data analysis and visualization, underlining their critical thinking and ability to present data-driven narratives with clarity and precision.



Workshop on Basics of Python conducted on 19th November 2024:

In this workshop, students were introduced to the fundamental concepts of Python programming, including sets, tuples, loops, and functions. These core concepts provided students with a strong foundation to understand the syntax and functionality of Python. Through detailed explanations and interactive discussions, students gained a clear understanding of how to apply these elements to write simple yet effective Python code.

To reinforce these concepts, students participated in hands-on exercises and practice sessions on platforms like HackerRank, which offered them real-world problems to solve. These practical sessions were designed to foster applied learning, enabling students to sharpen their coding skills, improve their problem-solving abilities, and become more confident in their programming capabilities.

By the end of the workshop, students were not only able to grasp the essentials of Python programming but also gained the necessary skills to move on to more advanced topics. The exposure to various coding challenges and problem-solving exercises helped them build a solid foundation in Python, equipping them with the confidence to tackle more complex programming tasks in the future. Moreover, the hands-on approach sparked curiosity and encouraged students to continue learning, explore more advanced Python topics, and participate in coding challenges to further enhance their skills.

Impact on the students:

The workshop equipped students with a solid understanding of Python basics, including sets, tuples, loops, and functions. Hands-on practice through HackerRank challenges enhanced their problem-solving skills and boosted their confidence in coding. By the end, students felt prepared to advance to more complex Python topics and were motivated to continue exploring programming, applying their newfound skills in future challenges.As they worked through the challenges, students gained confidence in their ability to write efficient and effective Python code, building a sense of accomplishment with each task they completed.

KG REDDY College of Engineering & Technology
AN AUTONOMOUS INSTITUTION

INSTITUTION TOPPERS

NAME : JASTI DYUTI SRI
CGPA : 9.10
YEAR : IV

"Being in the Data Science Department has given me hands-on experience through technical sessions, workshops, and industry projects, enhancing my problem-solving skills and preparing me for real-world challenges."

NAME : MOKKALA SUBRAMANI
CGPA : 9.10
YEAR : IV

"The department's expert faculty, including PhD candidates, stay updated with the latest concepts and have provided valuable mentorship, guiding me in both academics and career planning."

NAME : PENTA MANOGNA
CGPA : 8.99
YEAR : IV

"With frequent industrial visits and collaborations, I have gained insights into how data science is applied in different sectors. Understanding industry requirements has helped me develop the technical and analytical skills needed for a successful career."

ACADAMIC TOPPERS

NAME : JASTI DYUTI SRI
CGPA : 9.10
YEAR : IV

"Being in the Data Science Department has given me hands-on experience through technical sessions, workshops, and industry projects, enhancing my problem-solving skills and preparing me for real-world challenges."

NAME : MOKKALA SUBRAMANI
CGPA : 9.10
YEAR : IV

"The department's expert faculty, including PhD candidates, stay updated with the latest concepts and have provided valuable mentorship, guiding me in both academics and career planning."

NAME : PENTA MANOGNA
CGPA : 8.99
YEAR : IV

"With frequent industrial visits and collaborations, I have gained insights into how data science is applied in different sectors. Understanding industry requirements has helped me develop the technical and analytical skills needed for a successful career."

ACADEMIC TOPPERS

NAME : Rai Reena
CGPA : 8.74
YEAR : III

"The department encourages research and innovation, allowing students to explore new ideas in machine learning, AI, and big data. Engaging in research projects has enhanced my critical thinking and problem-solving abilities."

NAME : Pattargatti Sneha
CGPA : 8.72
YEAR : III

"Beyond technical knowledge, the department emphasizes interdisciplinary learning, covering business intelligence, AI ethics, and entrepreneurship. This well-rounded approach has broadened my perspective and career options."

NAME : Mandaloji Vaishnavi
CGPA : 8.69
YEAR : III

"Through hackathons, coding challenges, and case study competitions, I have developed a competitive mindset. These activities have sharpened my analytical abilities, teamwork, and quick decision-making skills."

ACADEMIC TOPPERS

NAME : Taalla Vaishnavi
CGPA : 9.13
YEAR : II

"The department provides valuable career guidance, including sessions on higher education, job opportunities, and entrepreneurship. This has given me clarity on my future goals and the pathways available to achieve them."

NAME : Mabbu Sushmitha
CGPA : 8.47
YEAR : II

"By interacting with industry experts, alumni, and professionals during guest lectures and networking events, I have built meaningful connections. These interactions have helped me understand industry trends and expand my professional network."

NAME : Ragulapally Vandana
CGPA : 8.31
YEAR : II

"The opportunities provided by the department, from project-based learning to leadership roles, have boosted my confidence. Presenting my work, collaborating with peers, and taking on responsibilities have contributed to my personal and professional growth."

Students Feedback

NAME : Manne Dinesh
YEAR : IV

"The department offers a well-structured curriculum that covers fundamental and advanced topics like machine learning, deep learning, and big data analytics. This comprehensive learning approach has given me a strong foundation in data science."

NAME : V. Vinay Sai
YEAR : IV

"Through real-time projects and practical lab sessions, I have gained hands-on experience in data analysis, visualization, and AI model development. This practical exposure has made me more confident in implementing theoretical knowledge."

NAME : Rammurthy
YEAR : IV

"The faculty members are not only knowledgeable but also approachable and supportive. Their guidance in academics and career decisions has helped me navigate my learning journey more effectively."

Students Feedback

NAME : Chavali Abhiram
YEAR : III

"The department ensures that students stay updated with the latest trends in AI, IoT, and cloud computing. This exposure has enabled me to understand the evolving landscape of data science and its future possibilities."

NAME : Pavan Sai
YEAR : III

"Through coursework, projects, and competitive challenges, I have developed a problem-solving mindset. This has allowed me to approach complex data-driven problems logically and efficiently."

NAME : Keerthana
YEAR : III

"The department promotes research and innovation, encouraging students to think creatively and explore new solutions. Working on innovative projects has given me the confidence to contribute to advancements in data science."

Students Feedback

NAME : Jalaneel Shradha Shekhar
YEAR : II

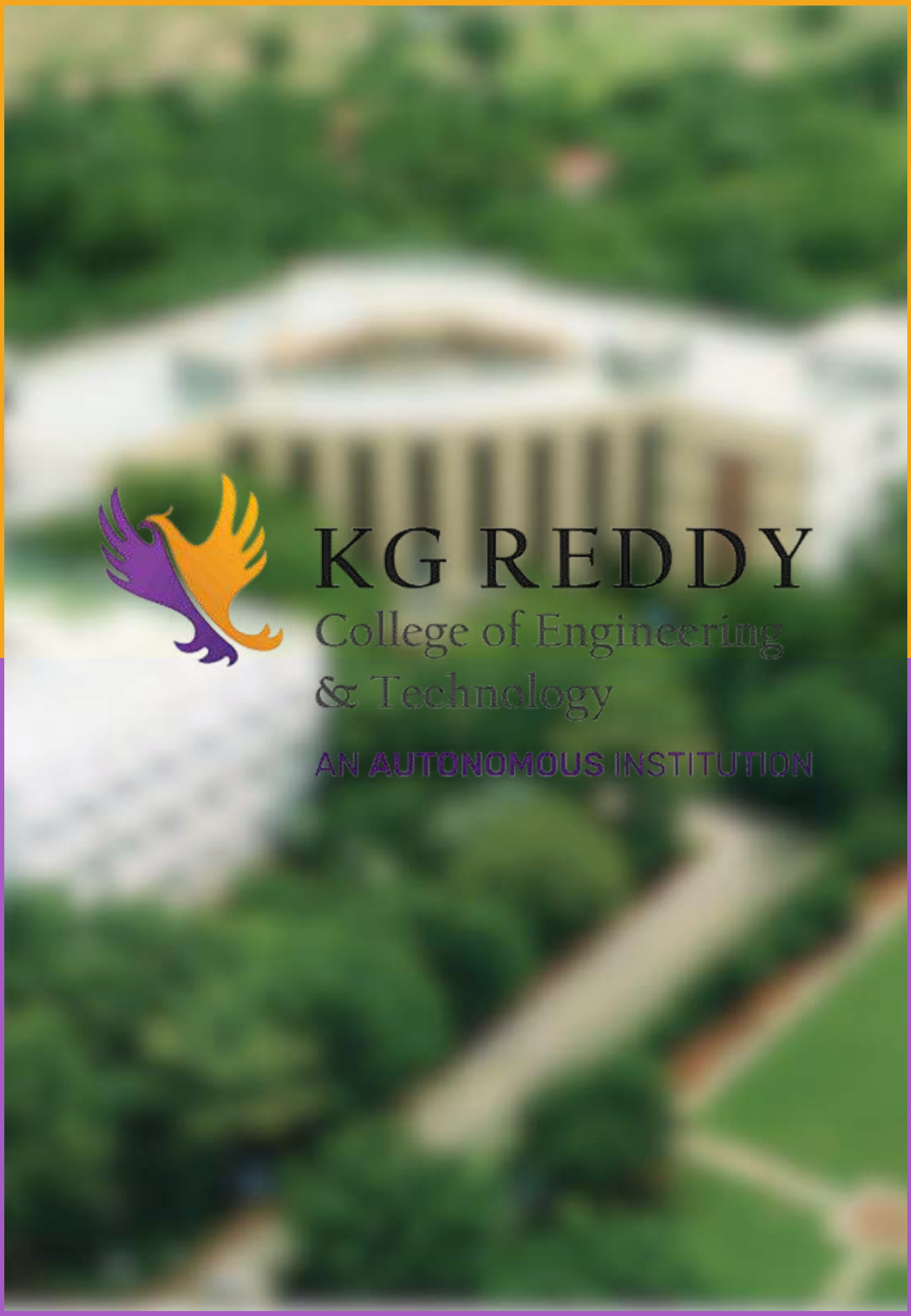
"Workshops and industry interactions have helped me enhance not just technical skills but also soft skills like communication, teamwork, and leadership—essential qualities for a successful career in data science."

NAME : Pailla Siddharth Reddy
YEAR : II

"By working on case studies and industry-based projects, I have learned how data science is applied in real-world scenarios. Understanding how data-driven decisions impact businesses has been a valuable learning experience."

NAME : Kota Rakesh
YEAR : II

"The guidance provided on higher education and certifications has inspired me to further my learning in data science. I now have a clearer vision of pursuing specialized courses and research in this field."


KG REDDY
College of Engineering
& Technology
AN AUTONOMOUS INSTITUTION