

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)

Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Department of Electronics and Communication Engineering

One Day Workshop Report

On

“Internet of Things and Idea to Product”

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Submitted by

Mrs.P.USHA,

Assistant Professor

ECE Department



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READ
DEPT. OF ELECTRONICS & COMMUNICATIONS ENGINEERING
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Resource Person1:



Mr.G.Krishna, CEO – NextByte Innovations

Krishna is the Founder and CEO of NextByte Innovations. He is responsible for the company's vision, overall strategy, business and technology.

He is an engineering professional who has worked in various fields, including embedded engineering, Internet of Things and Robotics Industry. In Electronics sector, he has worked as a Consultant for startup's and student entrepreneurs in converting ideas into product.

He now specializes in offering PoC Development and consulting services, product development and corporate trainings on advanced Embedded Systems, Internet of Things and Robotics' technologies.

He holds a degree in Electronics and Communication Engineering from KG Reddy College of Engineering and Technology of JNTU-H.

Resource Person2:

Miss. Tarini Vijay Puglia, CPO – NextByte Innovations

Tarini is the CPO of NextByte Innovations. She is responsible for the company's product development, overall production and technology.

She is an engineering professional who has worked in various fields, including embedded engineering, Internet of Things and Robotics Industry. In Electronics sector, she also worked on automation industry.

She now specializes in offering Product development and corporate trainings on advanced Embedded Systems, Internet of Things and Robotics' technologies.

She holds masters in Electronics and Tele Communication Engineering from VJTI-Mumbai.

Summary Report of workshop on “Internet of Things and Idea to Product”

Anyone who says that the Internet has fundamentally changed society may be right, but at the same time, the greatest transformation actually still lies ahead of us. Several new technologies are now converging in a way that means the Internet is on the brink of a substantial expansion as objects large and small get connected and assume their own web identity.

Following on from the Internet of computers, when our servers and personal computers were connected to a global network, and the Internet of mobile telephones, when it was the turn of telephones and other mobile units, the next phase of development is the Internet of things, when more or less anything will be connected and managed in the virtual world. This revolution will be the Net’s largest enlargement ever and will have sweeping effects on every industry and all of our everyday lives.

Smart connectivity with existing networks and context-aware computation using network resources is an indispensable part of IoT. With the growing presence of Wi-Fi and 4G-LTE wireless Internet access, the evolution towards ubiquitous information and communication networks is already evident. However, for the Internet of Things vision to successfully emerge, the computing paradigm will need to go beyond traditional mobile computing scenarios that use smart phones and portables, and evolve into connecting everyday existing objects and embedding intelligence into our environment. For technology to disappear from the consciousness of the user, the Internet of Things demands: a shared understanding of the situation of its users and their appliances, software architectures and pervasive communication networks to process and convey the contextual information to where it is relevant, and the analytics tools in the Internet of Things that aim for autonomous and smart behavior. With these three fundamental grounds in place, smart connectivity and context-aware computation can be accomplished.

Topics covered:

Theory:

- ✓ What is IoT and applications?
- ✓ What is Robotics and applications?
- ✓ What are Embedded Systems and applications?
- ✓ Why IoT?
- ✓ Blocks of IoT
- ✓ Architecture of IoT
- ✓ 4 Layers of IoT and their explanation

- ✓ Node Layer
- ✓ Gateway Layer
- ✓ Cloud Platform Layer
- ✓ Application Area's
- ✓ Use case of Smart Home.
- ✓ Use case of Smart Shopping

Practical:

- ✓ ESP8266 programming
- ✓ Arduino IDE
- ✓ Connecting ESP to WIFI
- ✓ Temperature and Humidity Programming
- ✓ Connecting microcontroller to internet
- ✓ Cloud Platform (Blynk) and Mobile APP
- ✓ Sending data to cloud platform
- ✓ Viewing sensor data on mobile app
- ✓ Controlling LED from Mobile app over Internet
- ✓ Controlling AC appliances (230V Bulb) over internet using mobile app

How to convert idea into product/service:

- ✓ Identify the real problem
- ✓ Write down the solution
- ✓ Identify the customers and users
- ✓ Time to do research
- ✓ Identify strengths and weakness
- ✓ Market size
- ✓ Check Financials