

SRI RAMA SUDHAMSU RACHAPUDI

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A passion towards building new devices and products to make lives easier led me in the path I have chosen. To work in one of the most revolutionizing field of technologies in the past century, Semiconductor Industry, building smaller, faster and efficient devices would give me a satisfying sense of achievement.

EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY, HYDERABAD M.TECH – MICROELECTRONICS AND VLSI	2020 - PRESENT 9.46/ 10
BIRLA INSTITUTE OF TECHNOLOGY MESRA B.E. ELECTRICAL AND ELECTRONICS ENGINEERING	2012 – 2016 8.38 / 10
<ul style="list-style-type: none">• Stood amongst the top 5 in my Branch in Academics.	
NARAYANA JUNIOR COLLEGE MPC – INTERMEDIATE	2010 – 2012 97.2%
<ul style="list-style-type: none">• Stood amongst the top 100 students in the State of Andhra Pradesh securing 972/1000.• AIEEE – AIR 13608; EAMCET (State Engineering exam) – Rank 794 (top 0.3%)	

TECHNICAL ABILITIES

- **SPICE Tools** : NGSpice, Multisim.
- **EDA Tools** : Autodesk EAGLE, KiCad.
- **Programming** : Verilog (HDL), C, Data Structures, Python, Wiring.
- **Embedded Platforms** : Arduino, Raspberry Pi, ESP.
- **Miscellaneous** : MATLAB, Fusion360, SketchUp, AutoCAD, Photoshop, Premiere Pro, Lightroom.

EXPERIENCE

CYBEREYE RESEARCH LABS & SECURITY SOLS PVT LTD (IB GROUP) HARDWARE ENGINEER – DESIGN	2018 HYDERABAD, TELANGANA
<ul style="list-style-type: none">• Handled Hardware Design, Debug and Testing for projects with Telangana State Govt..• Designed and Developed Tracking solutions using a Low Power WAN technology, LoRa, with backup connectivity using GSM and Satellite devices like Iridium and Globalstar.• Responsible for Exploration and Reverse Engineering of existing products for functionality and design improvements.• Setup and Configuration of third party LoRa gateways to work with custom designed LoRa nodes and deployed Gateways with a backup uninterrupted power supply for 24hours.• Designed new POCs (Proof Of Concept) for ‘Smart Cities’ project using custom designed nodes.• Overseen other parts of design, procurement, assembly and product casing.	
IBUILD INNOVATIONS INDIA LTD (IB GROUP) HARDWARE ENGINEER – DESIGN	2016 – 2018 BENGALURU, KARNATAKA
<ul style="list-style-type: none">• Designed a GSM-GPS tracker of a total size of 1-inch square.• Designed an ESP based Development board – Octabrix with add-on sensors and RGB ring which was used to train more than 8000 students (by 2018) and corporate professionals in IoT.• Automated and streamlined the process of creating 100s of “Experiment” files for Virtual Labs - IoT using Python scripting which saved around 2-3 hours per experiment.	

- Worked with various platforms, development boards and SBCs – Arduino family, Raspberry Pi, NodeMCU, ESP family, SodaQ and Nucleo.
- Streamlined Schematic Design and Layout flow by creating Libraries, Design Blocks and 3D models.
- Designed Test plans and Debug procedures for proper assembly and functionality of the PCBs.
- Guided and Trained interns and new recruits in Hardware Circuit Design, Arduino and EDA tools (Autodesk Eagle and Kicad).
- Conducted and trained attendees in multiple IoT workshops.
- Worked on multiple projects like Offline GPS Logger, ESP32-based Dev. Board, Powerbank and POCs such as Smart Click (Slick – Amazon Dash), Philips Hue replica, Smart Bin and many more.
- Worked with different cloud platforms like Thingier, Thingspeak, Blynk, Cayenne, Thingworx etc. and communications protocols like UART, USB, I2C and SPI.

PROJECTS

- ❖ **Smart-Switch (Freelance)** – WiFi controlled 8-switch panel of 10A current rating with regulator in-built.
- ❖ **Smart Bin** – An intelligent bin connected to cloud and monitors fill level for efficient waste management.
- ❖ **UGV (Unmanned Ground Vehicle)** – Similar to a Drone (UAV), a robot with a robotic arm that reaches specified location when it's dangerous for humans to enter. [Worked on Firmware and integration of GPS and Gyroscope]
- ❖ **Smart Plug** – A simple plug that converts any electric outlet 'smart and controllable' along with power measurement.

ACHIEVEMENTS & CO-CURRICULARS

- Secured **3rd Prize** in the robotics competition STAND AND DELIVER in BITOTSAV'14.
- **Stood first** in the Industrial Training on "Power Plant Familiarisation" at APGENCO, 2015.
- Acted as Vice-President for a Departmental technical team "Team Avion".
- Organised National Student Congress (NSC) held by IETE all over INDIA at BIT Mesra.
- Was offered INSPIRE Scholarship by the Department of Science & Technology, Government of India.
- Conducted workshops on "PLC and SCADA Basics" and "Advanced Micro – Controller Applications".
- **Secured Silver Medal** in the State wide Karate Tournament conducted by THE WORLD SHOTOKAN KARATE DO FEDERATION in 2009.
- **Quarter-Finalist – Worldwide** in the Peace Poster Contest conducted by LIONS CLUB in 2008.
- Attended many parades as an NCC Cadet in BIT Mesra.
- Stood First, Second and Third in many cultural competitions like Drawing, Elocution, Essay Writing, Singing, Quiz in inter-school level.

ACTIVITIES

- Hobbies** : Exploring new technologies and products, Badminton and Sketching.
- Conferences** : IoT Show – 2020, The Things Conference India 2018, IOT Conference EFY 2017, TechSparks 2016.
- Workshops / Trainings** : LoRaWAN Academy, PLC & SCADA, Power Plant Familiarisation.