Nithish Kumar Ravella

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SUMMARY

Highly motivated and quick-learning professional with a B.Tech degree in Electronics and Communication Engineering, specialization in Internet of Things and Sensors from the prestigious Vellore Institute of Technology, Vellore. Previously, I was employed at Tata Technologies as a Design Engineer/ Performance Calibration Engineer. My areas of interest includes IoT, Embedded Systems, Automation and Cloud technologies. I am passionate to explore emerging technology projects and solve problems efficiently.

EDUCATION

Vellore Institute of Technology, Vellore, IND — Jul 2018 – May 2022
- *B.Tech - ECE with Specialization in Internet of Things and Sensors* — GPA: 7.92/10.0

Bhashyam IIT-JEE Junior College, Andhra Pradesh, IND — July 2016 – May 2018
- *Higher Secondary School - Science with Mathematics* — GPA: 9.32/10.0

EXPERIENCE

Design Engineer | *TATA Technologies, Bengaluru* — Jan 2022 – Dec 2023
- As a Design Engineer/ Performance Calibration Engineer, I worked with urea dosing modules and temperature sensors, tuning their performance parameters in a Simulink model to achieve emission regulation compliance. Using MATLAB and real-time data collected from remote trucks, I carefully analyse vehicle behaviour under varying conditions. This IoT-data-driven approach enabled me to fine-tune engine diagnostics for optimal performance in real-time.

Technical Consultant(Free Time) | *O2Labs, Hyderabad* — Aug 2021 – Present
- As a Technical Consultant at O2Labs in Hyderabad, my primary role involves collaborating with the technology teams to brainstorm and develop innovative solutions. I have been active in designing IoT-enabled subsystems, leading the prototyping process, and implementing technical solutions for diverse projects, including contactless smart vending machines and cloud printers. This helped me to stay connected with emerging tech and apply real-world solutions.

PROJECTS

Ice cream Truck Solution | *Raspberry Pi, Sensors, API, IoT, AWS IoT, AWS Cloud* — Dec 2023 – Present
- Designed and implemented a real-time solution for monitoring ice cream truck conditions during transit to identify the root cause of ice cream spoilage.
- Used Raspberry Pi controller with BME280 module for indoor weather monitoring, NEO-6M GPS module for location tracking and weather API for ambient conditions data. Data is seamlessly transmitted to AWS IoT Core, stored in DynamoDB, and triggers email alerts for unexpected events via SNS service. Revision2 is under development.

Smart Farm Application | *Web App, API, Raspberry Pi, Python, ESP32, AWS, Grafana* — Nov 2023 – Present
- Creating a web application for managing farm motors remotely and identifying the weather info & predictions.
- Using Raspberry Pi and ESP32 for realtime data collection from farm sensors and transmitting the data to AWS cloud. Farmer can remotely control actuators and understand the weather prediction for next 7 days from open APIs.

COURSES & CERTIFICATIONS

- **IoT Wireless & Cloud Computing Emerging Technologies**, Yonsei University, April 2021
- **AWS IoT: Developing and Deploying an Internet of Things**, Amazon Web Services, November 2021
- **Fundamentals of Red Hat Enterprise Linux**, Red Hat, December 2021

TECHNICAL SKILLS & INTERESTS

Programming Languages: Python, C/C++
Development Tools/Boards: MATLAB simulink, Arduino, ESP32, Raspberry Pi, Tinkercad, ThingSpeak IoT
Others: IoT Protocols, AWS, AWS IoT, OBD Diagnostics, Linux, Networking, Git, MongoDB
Skills: Product Engineering, Development & Ownership, Staying Updated with Emerging Technologies
Areas of Interest: Internet of Things, Embedded Systems, Automotive, Automation and AgriTech