Ganesh Induri

ganeshinduri4@gmail.com | 7981923964
github.com/GaneshInduri9 | linkedin.com/in/ganeshinduri9

Skills

Languages: Java, C, React js, JavaScript Python, Groovy, Shell Script
Technologies: AWS IoT core, Zigbee Protocol, GObject
Methodologies: Inter-Process Communication (IPC), Data Structures and Algorithms

Work Experience

Comcast, Chennai Jan 2023 - Present

Software Development Engineer

- Developed GObject client API's which helps to pair Zigbee devices and commission a Matter device (to a gateway), communicate with existing devices on the network, also provided client's with G-Object signals that happens when there is an event in the network (i.e : zigbee channel change event, zigbee network interference events).
- Played a vital role in open sourcing the Barton project, which provides clients with device control and management on the network.
- Integrated GObject introspection, allowing clients in various programming languages to interact with the device- API through automatically generated bindings.
- Added local time zone and DST support for gateways, enhancing automation functionality. This ensured scheduled tasks aligned with regional time changes. As a result, the system became more reliable, particularly in areas with frequent daylight-saving time adjustments.
- Developed a Python tool that updates the device descriptor list (an XML file) with the checksum of the latest firmware for a device, validates this checksum against the actual checksum before proceeding with OTA upgrades, which eventually deployed to over 10 million devices.
- Developed automations for chime devices, including Door-Window sensor chime automation, Door-Lock chime automation, and Door-Bell chime automation. Additionally, added telemetry support for these automations, improving the visibility of chime-based processes.
- C, Java, Python, AWS-IoT core, G Object, Docker, Linux OS.

Education

Vel Tech Rangarajan Dr. Sagunthala R&D institute of Science and Technology Aug 2019 - Jun 2023
B-Tech in Electronics and Communication Engineering ***CGPA:8.37/10***
Relevant Coursework: Object Oriented Programming, Discrete Maths, Data Structures and Algorithms, Operating Systems, Networking, Advance Data Structures and Algorithms, Image Processing, Digital Signal Processing.

Project Work

- **React based Weather App (2024):** Developed a React based weather app, this app allows users to search for the weather conditions of any city in the world and provides weather information. It also provides the forecast for the next five days. It also has an option to get the weather based on the current location. The app uses Shecodes weather api to weather data.
- **IoT-based Smart Agriculture System (2023):** Developed a smart farming solution using **binary search trees** for efficient sensor data management and **graph algorithms** for optimized irrigation. Integrated **AWS IoT Core** for real-time monitoring and control, with **Zigbee** for wireless sensor networks.
- **Distributed File Management System (2022):** Developed a system to manage and synchronize files across multiple machines using **Inter-Process Communication (IPC)** for efficient communication between processes. Shell scripts were used for automation. The implementation streamlined file access and reduced synchronization time by 40%, enhancing overall productivity for users.

Certificates and Interests

- C and Java Udemy, Data Structures and Algorithms on Coursera.
- Running, Gym, Reading books.