


ILURU DHANA LAKSHMI

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Summary

Aiming to contribute to the growth of an organization by leveraging my skills in software engineering and embedded systems. Seeking a challenging role that allows me to utilize my technical knowledge in network communication, embedded systems, and software development to drive innovation and success.

Technical Skills

- Experienced in developing applications using C, C++, Embedded C, Data Structures and Golang, with basic knowledge of Python and Linux.
- Knowledgeable in Linux systems, including kernel development, process management, IPC, file system management, and scheduling algorithms.
- Familiar with network communication protocols like 3GPP (NGAP, NAS, SBI, PFCP), Non-3GPP (IPSec, ESP, ISAKMP), and GTP.
- Hands-on experience with PIC16F877A and other PIC microcontrollers, including programming in MPLAB X IDE and using PICKit. Knowledge of UART, SPI, I2C, interrupt handling, ADC, and PWM for embedded systems.
- Experienced in Docker and Docker Compose for containerization.
- Skilled in MongoDB for database design, querying, and performance optimization.
- Proficient in debugging tools like Delve (GoLang), GDB, Valgrind, and Cppcheck.
- Knowledgeable in data structures such as Stack, Queue, Linked List, Structures & Unions, Pointers & Function Pointers, and algorithms like Sorting and Searching.
- Familiar with network tools like Wireshark, Git, and Postman.
- Experienced in cloud and virtualization, focusing on VM creation for core network function deployment.
- Proficient in writing optimized code, API testing, network performance monitoring, and documentation.

Professional Experience

- **Embedded Software Engineer:** - Feb 2024 to Feb 2025 [**1year**] Niral Networks Private Limited, Bangalore.

PROJECT-1:

Title :- N3IWF (Non-3GPP Interworking Function)

Team Size : - 2

Technologies: C, Golang, Linux, 5G Networking, Docker, Wireshark, GDB, Delve, Postman

Role : - Software development Engineer-I (Developer)

Description: In this role, I contribute to the development and enhancement of features for the **N3IWF** project, focusing on network communication and integration in **5G core networks** for non-3GPP devices. The use of the N3IWF is to connect the core without radio using WiFi routers. I work on improving network diagnostics, security, tunneling, and packet management.

PROJECT-2:

Title :- Trace

Team Size : - 2

Technologies: C, C++, Linux, 5G Networking, Docker, Wireshark, GDB, Mongo DB

Role : - Software development Engineer-I (Developer)

Description: In this project, I am responsible for developing features to activate and deactivate traces, focusing on monitoring UE (User Equipment) connections in a 5G network. I use **C** to handle low-level network tasks and **C++** to implement the logic for tracking connection success or failure events. The system captures detailed logs, which are stored in **MongoDB** for further analysis and troubleshooting. This helps diagnose network issues and improve overall performance. Additionally, I use tools like **Wireshark** for packet analysis and **GDB** for debugging.

Technical Competencies

Operating System	Linux, windows, Virtualization
Skills	C, C++, Embedded C, Data Structures, Golang, Linux, Python, Mongo DB
Software Version Control	GitBucket, CI/CD
Tracking Tool	Git, Wireshark, Delve, GDB, Docker, Docker Compose, Cppcheck, Postman
Development IDE	Visual Studio Code (VS Code)
Compliance's & Standards	SDN, 5G Standards, IOT Protocols, IEEE Standards
Tools & GUI	GitHub, Postman, Wireshark

Certifications And Course Completions

- Advanced Embedded Systems Course - Bytes in Bites Institution, Bangalore
- Python Online Course - Solo Learn
- Cisco Network Academy Python Essential
- Microsoft Office Certification
- NIRALOS 5G LAB HACKATHON CERTIFICATION

Education Details

- **B.TECH-** Electronics And Communication Engineering (2019-2023) in G.Pullaiah College Of Engineering And Technology with **8.78 CGPA**.
- **INTERMEDIATE-** Hari Hara Junior College (2017-2019) with **9.23 CGPA**.
- **SSC-** Z.P.H.School (2016-2017) with **8.2 CGPA**.

Personal Details

Name	: Iluru Dhana Lakshmi
Fathers Name	: Iluru Venkateswara Reddy
Address	: H.NO:2-0,Akkampalle (V),Sanjamala(M),Nandyal(Dist), AP-518145.
Current Company	: Niral Networks Private Limited, Bangalore
Date of Joining	: 01-02-2024
Experience	: 1 Year as Embedded Software Engineer
Total Experience	: 1 Year
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