

GORANTLA KATHYAYANI

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Professional Summary

Dynamic Associate Engineer with 1 year 2 months of experience specializing in Linux device driver development and embedded systems. Proficient in C programming, Data structures, Linux kernel internals, and Device Drivers. Skilled in debugging, multi-threaded programming, and developing robust driver solutions for peripherals and subsystems. Adept at collaborating in cross-functional teams and delivering high-quality embedded software solutions.

Technical Skills:

- **Programming Languages:** C, Data Structures
 - **Operating Systems:** Linux, OpenBMC
 - **Architectures:** ARM32/64, RISC-V
 - **Boards & SoCs:** RPI3, BeagleBone Black, NanoPI M3
 - **Subsystems & Protocols:** I2C, UART, GPIO, USB, SPI.
 - **Debugging Tools:** JTAG, GDB, Valgrind.
 - **Development Tools:** Buildroot, Git, Make, OBJ Dump, read elf, GCC.
 - **Concepts:** Multi-threading, IPC, Linux Kernel Internals
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Highlights:

- Strong in c.
 - Good knowledge on bash.
 - Ability to learn new things quicker.
 - Hands on experience in System, Kernel module and Device driver programming in **Linux, OPENBMC**
 - Having good knowledge on processor architectures like **ARM 32/64 and RISC-V**.
 - Having good knowledge on boards like **RPI3, BBB, NanoPI M3**.
 - Having Hands-on experience on **Bare Metal device drivers** and frameworks for custom **SOCs** with Multicore architecture.
 - Having good experience on boards brings up on ARM SoCs
 - Having good development experience with different subsystems like **I2C, UART, GPIO, SPI, USB**.
 - Having work experience with different tools like **Git, GDB, GNU, GCC, Make**.
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Projects:

1. INTEREX DATA Center Board Management Card work Experience Interex Semiconductors (Associate Engineer)

The INTBMX2401 is a Board Management Controller, it is powered by the INTX2401 complies with the OCP DC-SCM standard, making it ideal for datacentres. Our INITX2401 combines silicon, advanced AI security with data collection, and software into a compact, power-efficient INIBMX2401 with unique AI functionality explicitly designed for security, safeguarding cloud datacentres and network subsystems. TCU is Asymmetric Multiprocessing system (Arm Cortex-A53 quadcore, Arm Cortex-M55 Quad multiprocessor, and Arm Cortex-M7) including, MALI-G10, PCIe-Gen4, Usb3.1, I3C, SGPIO, I2C, GPIO, MIPI-CSI & DSI interfaces. and AIML subsystem and Advanced Boot Security Subsystem.

Responsibilities:

- Involved in linux and u-boot bring-up on Virtual and Silicon Platform.
 - Implemented Bare Metal for driver from the scratch for I2C.
 - Prepared DTS node I2C master.
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2. IoT-Based Temperature Monitoring System Using Raspberry Pi

Description:

The IoT-based temperature monitoring system is designed to continuously monitor environmental temperature using the LM75A digital temperature sensor, which communicates with the Raspberry Pi via the I2C protocol. The Raspberry Pi collects temperature readings and serves as a client, sending this data to a central server using socket programming. This approach facilitates a robust communication mechanism for real-time data transmission.

Responsibilities:

- Integrated the LM75A digital temperature sensor with Raspberry Pi using the I2C protocol for real-time temperature data acquisition
 - developed client-side code in C to continuously read and process temperature data from the sensor.
 - Implemented TCP socket communication for reliable transmission of temperature data to a central server.
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Academic Project:

1. Predicting students' performance by using different machine learning algorithms.

Description:

For necessary pedagogical interventions to be carried out effectively to assure students' on-time and satisfactory graduation, it is essential to accurately estimate future performance based on ongoing academic records. Every year in all universities only 50 % student complete graduation courses successfully and the remaining students fail to complete courses so by using this paper machine learning algorithms college people can predict future performance of students by giving his past performance GPA as input to the machine learning algorithms.

Responsibilities:

- Identify and select relevant features that may impact student performance and create new features if necessary to improve model accuracy.
 - Choose appropriate machine learning algorithms (e.g., linear regression, decision trees, random forests, support vector machines, or neural networks) based on the nature of the data and the prediction objectives
 - Analyze and interpret the results to understand the significance of various features and how they contribute to the prediction of student performance.
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Education

B.Tech in Computer Science and Engineering

QIS Institute of Technology (2019 - 2023)

- CGPA: 7.0
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Certifications & Training

- Certified in Embedded Systems from MosChip Institute of Silicon Systems.
 - Awarded "Trainee of the Month" for excellent performance.
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