

Professional Summary

13 years of experience in embedded systems design and development, kernel porting, device drivers, coding user applications for sensors, developing micro services (edge computing) for IoT gateway and team management to design systems for the real world.

Skills

System Design and Architecture	Microservices for IoT gateway	Kernel porting
Project planning & Management	Communication protocols	Device drivers
RESTful APIs using Flask	Wireless sensors integrations	Debugging and fixing bugs

Tool & Technologies

- Proficient in C and understands Python language
- Porting OS (Zephyr, Linux and ECOS) on armv7 architecture for various custom boards
- IoT sensors and board peripherals porting for various custom boards using Zephyr and Linux OS
- Design micro services for edge gateway (Edge computing on Raspberry Pi based)
- Worked on Modbus, OpenThread, MQTT, WiFi, RS232, USB, SPI, I2C protocols
- Good understanding of debuggers and oscilloscopes
- Git

Work History

Engineering Manager

(Jan 2020 till date)

Zenatix Solutions Pvt Ltd(A Hero Electronix Venture)

- Design Plug n Play architecture for their Building Management Systems
- End to end design, development and execution of the in-house wireless sensor products (gateway to sensor devices)
- Manage Embedded team (both technical and project) for the in-house wireless sensor products
- Manage edge team (both technical and project) for the micro services on the gateway side (over RPi)
- Leading the IoT stack automation, deployments and Over-the-air updates
- Hands-on experience for doing required PoC for decision making

Freelancer Consultant

(Jan 2019 till May 2019)

US based startup Neuruno Inc.

- Porting Zephyr for the new SoC (mkl27 – Kinetis Ultra-Low-Power MCU based on ArmCortex -M0).
- Written application for the integration of the new spectroscopic sensor.
- Designed and coded the state machine based on the requirements.

Career break

(Mar 2017 till Jan 2019)

Lead Software Engineer

(Jan 2014 till Mar 2017)

Open Silicon Research Private Limited

- Fixing Gateway bugs reported by the customers.
- Worked on system bring up, & IoT (Internet of Things).
- Worked on writing applications for ARM and ARC based system-on-chip (SOC).
- Porting and Integration of Linux 4.4 on an ARM-based System-on-Chip (SoC) using Device Tree for IoT Gateway project.

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- Integrating 9DoF sensors and writing sensor fusion code as the application for demonstration purposes.
- Provided support to team members, guiding and monitoring them for the activities. (size of 2 team members).

Tech Lead

(May 2012 till Jan 2014)

KPIT Cummins

- Porting and Integration of Linux 3.3 on an ARM-based System-on-Chip (SoC)
- Clock Framework development for SoC in Linux Kernel and integrated with all relevant IP Components
- Modification of Root File System for some of additional Linux Packages, required as part of porting.

Feature and module lead

(Oct 2010 till Apr 2012)

Aricent Technology

- Building a solution framework for a standard-based Hardware Platform Management
- Coding bunch of HPM features on top of it

Engineer

(Aug 2006 till Sep 2010)

Honeywell Technology Solution Lab (HTSL)

- Various testing and debugging assignments (as a System Testing engineer)
- Features Design and Implementation activities on HTSL existing product lines.
- Overall Features Development, along with some part-time project management activities like Efforts Estimation, Planning and Project Tracking related tasks.

Education

Under Graduation: B. E(ECE), Punjab Technical University,2005

Professional Courses: Diploma, Embedded Systems and Design, CDAC, Pune,2006

Schooling: DAV Public School, Dayanand Vihar, Delhi, 2001