
Summary

- Working with **Wipro** as a **Senior Software Engineer**, with **Cisco** as client. Work is on Cisco's line of products namely **Cisco Meeting Server** ie CMS 1000 and CMS 2000. These are secure, on premise-based video, audio, and web communication technologies and products. Involved in design, development, deployment, release and maintenance.
- Diverse work experience (**11 years**) across IT industry (**7 years**) and academia (**4 years**) alike.
- Skills in **Python (Beginner)**, **C (Advanced)**, **Embedded Linux (Advanced)**. Exposure to complete SDLC and Agile processes, Scrum, Kanban, TDD and GIT version control with Firmware, Device Drivers, Embedded Applications etc on Embedded Linux, RTOS over AVR, ARM, RISC, Intel x86 platforms.

Technical Skills

Product: Embedded Systems, Embedded Software, Embedded Linux, Buildroot, Yocto, Secureboot

Languages: C, Embedded C, Python, BASH Shell scripting, L^AT_EX, Assembly, RUST

Hardware: 8051, AVR, ARM, BlackFin, x86, RISC-V **Platforms:** Arduino, Rasberry Pi

Protocols: TCP/IP, UDP, UART, USART, SPI, I2C, USB, CC2500, WiFi, ZigBee, 802.x, CAN, Ethernet, FlexRay, network drives, and various protocol stacks in IR 4.0 and in IOT, IOT-Ops, IOT-OS

Software Frameworks and Libraries: MATLAB, GNU Octave, GIT, OpenCV, OpenCL, H.264, H.265, OpenMP, various open source libraries and frameworks

Operating System: Ubuntu, Debian, Red Hat Linux RHEL 4/Fedora, Android, Embedded Linux, uClinux, Vmware EXSI, Virtualbox

Cloud: AWS, GCP, Azure, Docker, Kubernetes, GIT, Containers, JIRA, GitHub, GitLab, Bitbucket, Jenkins

Proficiency

Product: **Board bring up(4/5)**, **Linux Kernel internals(3/5)**, **Secureboot(5/5)**

Programming: **C (5/5)**, **Python (4/5)**, **BASH (4/5)**, **C++ (2/5)**

OS: **Linux (5/5)**, **Embedded Linux (5/5)**, **Android (5/5)**

Cloud: **Docker (4/5)**, **Google Cloud (3/5)**, **AWS (3/5)**, **Azure (3/5)**, **Kubernetes (3/5)**

Soft-skills: **Communication skills (5/5)**, **Mentoring (4/5)**, **Workshops (4/5)**, **Leadership (3/5)**

Work Experience

Wipro (parent) Cisco (client)
Senior Software Engineer

Bangalore, India
32 months | May 2022 - till date

- My role is of a Senior Software Engineer. The underlying work is on Cisco UCS (Unified Computing System) and on Cisco's line of products especially CMS (Cisco Meeting Server), namely CMS 1k, CMS 2k. and CMM (Cisco Meeting Management).
- Leading design, development and maintenance with the Platform team. Responsibility is on the build side, OS, Linux kernel, device drivers, middleware libraries up-gradation, application support etc.
- Optimizing performance, Benchmarking, security and qualification of CMS1k, CMS2k, with test cases. Resolving numerous JIRA tickets for bug fixing, security, CVE, and up-gradation tasks as well.
- Knowledge and skills on: **Virtualization:** Docker, Container, Hypervisor **Programming:** Buildroot, Linux, C, Shell **Build:** Jenkins (private builds and release builds), Git: bitbucket, GitHub, Cisco UCS server, and CM-ATC (Resources and Test automation) **Libraries and Tools:** Ansible, Jira, Vmware EXSI, Embedded Linux, OpenSSL, OpenSSH, CiscoSSL, CMS-GCC-toolchain, etc.
- Leading SecureBoot feature implementation right from Bootloader (encryption Uboot, Grub), to kernel (encryption with certificates), to application. End goal being a secure CMS platform.

MIT (Maharashtra Institute Of Technology)
Assistant Professor

Aurangabad, Maharashtra, India
25 months | March 2016 - April 2018

- I was working as an Assistant Professor in the Department of Electronics and Telecommunication. Responsibilities include Academics, Administration and Research activities.
- I was teaching the courses of ETC421: Advanced Embedded Systems Design, and ETC320: Radar and Satellite communication. I was a part of numerous internal committees, like start-up and innovation committee, IQAC, robotics club (MITRA), IPR and in house research etc.
- My most notable achievements include patents in the domain of IOT, 5G and UAVs which was well appreciated by the management. Helped students for project competitions. Engaged with Electronics, Mechanical, Computer science, thus enabling true inter-disciplinary projects.

TU Ilmenau Germany
PHD Researcher

Ilmenau, Thuringia, Germany
18 months | Sept 2013 - March 2015

- I was working as a PhD student in the graduate school in mobile communications (GS MOBICOM), TU Ilmenau, Germany
- My work was at the intersection of Embedded Systems, Digital Communications, and Artificial Intelligence, the topic being "Self Organized Multi UAV Message Ferrying". I had to discontinue as our graduate school was dissolved due to the cancellation of funding.

mAmigo Inc. (Now Seastar)
Software Engineer

Bangalore, Karnataka, India
7 months | May 2012 - November 2012

- I worked with mAmigo Inc. as a Software engineer on embedded projects. Primarily involved in IRIS based bio-metric security device. The product was highly successful and deployed widely across Fortune 500 companies, worldwide
- Implementing Board bring up: From boot loaders, kernel images of Linux & uClinux, device drivers to end applications, using build management tools like OE ie Open embedded, buildroot etc. on ARM and Blackfin platforms

- Implementing Application porting and diagnostics involving various peripherals like Timers, USB, SD MMC, Audio, Camera etc. using numerous open source libraries and frameworks. Boot time optimization, securing the device (offline and online) and bench marking performance of devices and peripherals under various test loads.

ThinkLABS Technosolutions Pvt. Ltd.
Technical Associate R&D

SINE IIT Bombay, Mumbai
18 months | January 2009 - June 2010

- I worked with ThinkLABS (SINE, IITB) initially as an intern followed by a full-term employment as a Technical Associate. Our focus was in Robotics and Embedded Systems. Being involved in the design, development, test and improvement phases both hardware and software of flagships products of the company namely iPitara, CiMPLE, and uNiBoard
- Ported uCOS and developed other applications on uNiBoard along with a team. Conducted numerous workshops, and activities for long term Embedded Training especially with RTOS (uCOS 2).
- Developed and conducted numerous Robotics workshops and Embedded educational trainings, all across the country right from an engineering college level to the corporate level
- Developed and tested along with a team the back end libraries of peripherals, memories, wireless modules (CC2500) on the Atmega family. These were used in products of iPitara, CiMPLE and uNiBoard.

Education

Dr. Babasaheb Ambedkar Marathwada University
B.Tech in Electronics and Telecommunication Engineering
 77% Distinction, 3rd in a class of 80 students

Aurangabad, India
May 2005 - May 2009

MSRSAS (Bangalore) Affiliated to Coventry University UK
M.S. [Engineering] in Real Time Embedded Systems
 Grade: Merit

Bangalore, India
Sept 2010 - May 2012

Universiti Teknologi Malaysia
PhD (AI for V2X communications) from UTM Malaysia (Pursuing)

Johor Bahru, Malaysia
April 2019 - till date

My work is on the topic of AI for V2X communications. Particularly focused on Optimization algorithms for Vehicle platooning in Multi-lane Heterogeneous Dynamic environments.

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 Last update: January 24, 2025
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