



# Surya Vardhan

## Embedded Software Engineer

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## SUMMARY

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Dynamic & innovative embedded engineer with strong sense of responsibility. Experienced in hardware and embedded design based on requirements. Proficient in embedded C, C++, and Linux programming. Expertise in RTOS based device driver development. Proficient in I2C, SPI and CAN protocols. I have delivered 4+ products from concept to commercialization in 35% less development time. I am currently trying to take on new challenges while growing the company and my skills.

## EXPERIENCE

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04/2022 - Present

### Senior Engineer - Software Design

Mistral Solutions Pvt Ltd

- Involved in Software Development Life Cycle processes like requirement analysis, designing, coding, testing, releasing, debugging, maintaining, and documenting at each stage.
- Followed agile methodology and participated actively in the scrum calls and retrospection meetings.
- Developed Device Drivers for Sitara Based microprocessors using TI Code Composer Studio.
- Integrated Test Farm for Jacinto processor-based development boards for automation testing in the Linux Environment test engine.
- Experience using JIRA defect tracking, Bitbucket Code Management, Confluence for project-related KB, and GIT for SVN.
- Experience creating board-specific Boot Binaries by coding Device Tree Files for Linux-based board bring-up, and interface integration.
- Involved in the Technical Recruitment team for hiring tech experts.

07/2021 - 02/2022

### Embedded Software Engineer

Nash Tech Labs

- Led a team of 5+ peers, responsible for Hardware & software integration for Embedded system development of On-Board Charger for Electric Vehicles.
- Solid experience in designing circuits, analyzing system requirements, debugging software for test logs and summary reports.
- Developed 32Bit MCU Firmware using IAR for 3.3kW Electric Vehicle Charging Station.
- Wrote technical documents such as Software Requirements, Software Design Descriptions, Software Verification, Datasheets, PCB Verification, User Manuals, Whitepaper, and Brochures.
- Managed a team of 4 peers in design and development of consumer electronics.
- Awarded as the fastest team leader in the organization for completing a project from concept to commercialize within a short period of 4 months.

08/2019 - 07/2021

### Senior Embedded Engineer

Senpronics

- Complete RTOS based C code in compliance with Mishra standards for development of security devices and products.
- By using multi-threading and multi-processing techniques, we have achieved higher and more stable performance in the development of IOT-based products and achieved a 37% increase in orders.
- Decreased 26% development cost by designing Windows Software for communicating with MCU over serial communication protocol using modeling tools such as LabVIEW.

- Developed Mission-Critical products like Bomb Detonator Jammers for Indian Army using FreeRTOS with IPC & Multithreading concepts thus increasing revenue by 34%.
- Pioneered high-precision Wi-Fi transmission in the development of high-precision DAQ, capturing 48% of the DAQ market.
- Gained knowledge about Radio Frequency Technology while developing RF Signal generators and developed Firmware with 20% increase in response time.
- Increased project velocity by 34% by proposing appropriate technical solutions in Scrum meetings based on in-depth knowledge of 16-bit and 32-bit microcontroller/microprocessor ARM architecture.

11/2017 - 02/2019

#### Tech Support Associate

Tech Mahindra Pvt Ltd

- Trouble Shooting Network Related Issues and resolved 1670 technical issues for customers & clients.
- Expert in trouble shooting OSI Layer 1,2,3 devices.

## EDUCATION

2017

#### Mechatronics Engineering

Anna University

Bachelor of Engineering

Innovated Automated Security System and

Method for Motor Bike Locking and patented under application number:20164103054, Issue: 09/2016, International Classification: G08B21/00.

## CERTIFICATES

12/2018 - 09/2019

#### Advanced Embedded Systems

10/2016 - 04/2017

#### Internship - Defense Research and Development Organization

## SKILLS

Embedded C, C++	Expert	JTAG, SWD	Intermediate
ADC, DAC, Bare metal	Advanced	Emulator, DMA, DSP	Advanced
Shell, Bash, Assembly	Advanced	MATLAB Simulink	Beginner
Python, Ruby	Beginner	8051, Soldering	Expert
Linux, Unix, RTOS	Intermediate	ARM Cortex-M, ARM Cortex-A	Intermediate
Real Time Operating Systems	Intermediate	I2C, SPI, UART, CAN, USART	Expert
Oscilloscope	Expert	PIC, ESP32, ESP8266	Advanced
Logic Analyzer	Expert	Modbus, RS232, USB	Beginner
Protocol Analyzer, CANoe	Advanced	Multithreading	Intermediate

## LANGUAGES

English	Fluent	Tamil	Native
Hindi	Fluent	German	Basic