

# S U R Y A V A R D H A N



EMBEDDED SOFTWARE ENGINEER

[HTTPS://SURYEAH.GITHUB.IO/](https://suryeah.github.io/)

## CONTACT

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## CERTIFICATION

Advanced Embedded Systems,  
**Vector India**, 2019

## INTERNSHIP

Regenerative Braking System for  
ARJUN MARK 3 MBT [R&D], **DRDO -  
CVRDE**, 2017

## PROGRAMMING SKILLS

C / Embedded C ██████████  
C++ / Assembly ██████████  
Shell Scripting ██████████  
Python / RTOS ██████████

## COMMUNICATION

English ●●●○  
Tamil ●●●●  
Telugu ●●○○  
Hindi ●●●○  
Kannada ●○○○

## PERSONAL INTERESTS

### Hobbies:

- Travel to connect with new people.
- Surfing for new tech gadgets online.
- Home and mobile automation for ease of life.
- Implementing projects in various domains on self-interest for self-satisfaction. [HTML, CSS, WordPress based web design, Galaxy Watch Face Design]

## ABOUT ME

Dynamic and innovative embedded engineer with a built-in sense of Responsibility. With the help of an Energetic and self-motivated attitude materialized 5+ new product in a short span of 1.2 years. Currently seeking to take up new challenges in developing critical systems simultaneously growing up the organization and my skills.

## EDUCATION

### Veveaham HrSec School

Completed  
03/2013

### PCMC, High School

State Board – Marks 82%  
Tirupur, Tamil Nadu

### CIET

Graduated  
04/2017

### Mechatronics, Bachelor of Engineering

Anna University – Marks 65.1 [CGPA]  
Coimbatore, Tamil Nadu

## EXPERIENCES

### As Embedded Engineer in SENPRONICS

08/2019 -  
Current

- Interacting with clients to understand their requirements and create Work Breakdown Structures [**WBS -MECE**].
- Project management from Start of Development [**SOD**] to End of Verification [**EOV**].
- Sole responsible person for complete Life Cycle of an embedded software system [**SDLC**].
- Conclude on Hardware components (Controller / Processor, ADC, Sensors, Battery, BMS, Component packages, etc.,) Software resources [IDE, Licences, UI, Interactive Software's, etc.,]
- Develop Embedded Firmware** and test the functionality on development boards and integrate all H/W's and give a **POC**.
- Board bring-up** and Implementing the complete system and **interpret errors**.
- Troubleshooting, Debugging, fix bugs and **optimize the system**
- Testing** the software for scalability and structure.
- Maintain & Validate** the software program
- High-level writing and **documentation** for Creating Data Sheet's, User Manuals, Whitepaper's, and Brochures.
- Coordinate** with Customer / Client and Development teams to make sure to deliver the product as per customer requirements.
- Recruit** technical Staff [Free-Lancers/ Full Time].



## SOFT SKILLS

Agile Principles	●●●●
Building Rapport	●●●○
Interpersonal Skills	●●●●
Good Coordination	●●●●
Release Management	●●○○



## PERSONAL INFORMATION

### Birthday:

14 DEC 1995

### Gender:

Male

### Father's Name:

Mr. D. Manikandan

### Nationality:

Indian



## PATENT DETAILS

**Title:** Automated Security System and Method for Motor Bike Locking

**Application No:** 20164103054.

**Issue:** 09/2016

### International Classification:

G08B21/00



## CLIENTS HANDLED

- Tata Steels, Pune
- Indian Institute of Technology, Delhi
- National Institute of Rock Mechanics, Bangalore
- Ratnagiri Impex, Bangalore.
- Millennium Technologies [p] Ltd, Bangalore.
- Defence Research and Development Organization, Avadi.



## TECHNICAL PROFICIENCY

### Controller/Hardware Architecture & Protocol

ARM Cortex M3 [STM32F103RCBT6]	8051 [ AT89S52, N76E003, ATmega329]	ARM Cortex M4 [MK66FXM0VMD18]
ARM Cortex M7 [IMXRT1062DVJ6A]	ARM Cortex M0 [STM32F030C8T6]	ARM 7 [LPC214x]
CAN / UDP /EEPROM	UART, I2C, SPI, TCP	IPC/Multithreading

### Software Tools

Keil MDK / GNU Make	Arduino IDE + GDB	ESP-IDF
MPLAB X / GCC	Solid Edge	NI LabVIEW
PyCharm / Git	Visual Studio + Micro	MATLAB[Simulink]



## PRODUCTS DEVELOPED

### RF Signal Generator

Role: Firmware Developer. Team Size: 2  
H/W: AD9951 / AD9959, STM32F0103, OLED, 4\*4 Keypad  
S/W: LabVIEW. STM32CubeIDE  
Clients: Indian Institute of Technology, Delhi.

### Earthquake Detector

Role: System Developer. Team Size: 3  
H/W: ESP32-D0WDQ6, ADXL345, Geophone  
S/W: TCP Client – Putty, ESP-IDF, Free-RTOS.  
Client: National Institute of Rock Mechanics, Bangalore.

### Portable Seismic Advanced Data Acquisition Unit

Role: Project Lead. Team Size: 2  
H/W: RPi 3 Mod B, AT mega 328P, LTC1859, LiPo Battery Pack  
S/W: Linux Distro for RPi, Shell Scripting.  
Client: National Institute of Rock Mechanics, Bangalore.

### High Precision Remote Data Acquisition Unit

Role: Hardware & Firmware Developer. Team Size: 2  
H/W: DS162 Spartan 6 FPGA, MK66FX1M0VMD18, ESP32-D0WDQ6  
S/W: TCP Client – Kitty for Data Collection, Arduino IDE, ESP-IDF.  
Client: Indian Railways

### RF2.4GHz Remote Tree Climber

Role: Firmware Developer. Team Size: 2  
H/W: N76E003, nRF24L01+, ULN2003, LiPo Battery Pack,  
Relay, Switches, Servo Motors, DC Motors.  
S/W: Keil µVision 5  
Client: Ratnagiri Impex, Bangalore.

### Man-Pack – Bomb Detonator Jammer [433MHz]

Role: Firmware Developer. Team Size: 8  
H/W: LiPo Battery Pack  
S/W: Visual Micro IDE  
Client: Chhattisgarh Police.

*\*Kindly visit the above given GitHub link to download product Datasheet*



## DECLARATION

I, Surya Vardhan, hereby declare that the information contained herein is true and correct to the best of my knowledge and belief.

Surya Vardhan

Bangalore, Karnataka

May 2021