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| Thiruvenkadam S |

Chennai | 52290703 | 7867096198 | thiruvenkadam.s@hcltech.com | [Skillrack](https://www.skillrack.com/faces/resume.xhtml?id=306652&key=d91d1c6506d1a867877ea307ef65e7b29ea4d3d3) | [Github](https://github.com/Thiru-venkadam) | [Leetcode](https://leetcode.com/u/ThiruVenkat/)

# Profile

* Embedded Engineer at HCLTech (SSE) with hands-on experience in firmware development, microcontroller programming, and real-time systems. Passionate about building reliable embedded solutions for automotive, consumer electronics, and IoT domains.

# Experience

## Senior software engineer | hcltech | nov 2024 – Present

* SSE in HCLTech Embedded software domain. Finished online trainings and Internal fresher certification program.
* Experience in embedded C/C++ in boards such as stm32 using both bare-metal and rtos.
* Trained interns in hands-on embedded projects.

## INTERN | ELECTRICAL Equipment engineering co. | jul 2022 – AUG 2022

* I got hands-on experience in Electric cable supply chain ranging from Raw material procurement to Customer relations.

## intern | Coca cola ltd. | FEB 2022 – MAR 2022

* I got hands-on experience in Substation maintenance, Electric motors and PLC application in beverage industry.

# Education

## B.e. EEe | nov 2020 – apr 2024 | rmkec, kavarapettai | 9.13 CGPA

## hsc | JUN 2019 – MAR 2020 | Velammal Matric hr sec school, ponneri | 538/600

## sslc | jun 2017 – apr 2018 | Velammal Matric hr sec school, ponneri | 471/500

# Skills & Abilities

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| --- | --- |
| * Shell scripting (bash,powershell) * C/C++, Embedded C/C++ & Python programming * Stm32, raspberry pi programming * Communication Protocols (I2C, I2S, SPI, UART, CAN) * Bare-metal (LL, HAL), RTOS | * X86\_64 assembly, WSL, NASM * MATLAB, STMCubeIde, Keil microvision * Soft skills (MS word, MS Excel) * VSCode, Git and Github * Sensors, ADC, DAC, motor control |

# Projects

## IN-CABIN NOISE DETECTION in automobiles

Here, I used omni-directional microphone sensor to get the ambient sound, ran FFT(fast fourier transform) using the collected data in stm32. Then,sent it to an esp32 to finally show the output in an online interactive graph as well as giving alert when the amplitude reaches certain threshold using deviation-energy algorithm.

* Skills: STM32 programming, I2S and UART protocols, Websocket and server side knowledge, Sensor Integration.

## Enhanced single switch module dc-dc converter with

## mitigation of voltage stress

The project aims to leverage the single-switch DC-DC converters to minimize voltage stress on components while maintaining efficiency and voltage gain for the efficient microgrid network.

* Skills: Electronics (Diode, MOSFET, IGBT), micro grid, Matlab.

## System to measure solar power

In this project, a solar panel is used that keeps monitoring the sunlight. Here different parameters of the solar panel like voltage and current are monitored and are sent to a remote PC.