

EMMADI BALAKRISHNA

Embedded Engineer

Embedded system design and firmware development engineer with 3+ years of experience. Strong Analytical and Interpersonal skills and Good team-player, Can work independently towards the development of best in class innovative embedded products.



✉ ebalakrishna777@gmail.com

☎ 9010624798

📍 Hyderabad, India

📅 29 January, 1997

WORK EXPERIENCE

Embedded Engineer

Techolution India Pvt Ltd

03/2022 - Present

Hyderabad, India

At Techolution, I am a part of product development team and handling Firmware design and development for voice-AI models running on microcontrollers. I have been working on Dual-core controllers (from STM and NXP).

Junior Embedded Engineer

Metrix Automation India Private Ltd

02/2020 - 02/2022

Hyderabad, India

At Metrix, I am a part of the product development team. Their i was involved in testing and development of both firmware and Hardware. I was involved in Embedded C code development on STM32 controllers and PIC controllers.

PROJECTS

Automatic Door Opener (03/2022 - Present)

- **Company** : Techolution. **Controllers** : Nordic NRF52840, STM32H747 and ESP32. **IDE**: Segger Embedded studio, STM32 Cube and Arduino. Zephyr RTOS, Bare metal.
- **Contribution**: Implementing Inter-Process Communication (IPC) on multi-core, running neural network models and interfacing external memories with stm32h747x and NXP MIMXRT1176 Dual Core controllers. Porting existing code from stm32h747x to NXP mimxrt1176 controllers.
- ADO is robotic based product which is combination of multiple streams like embedded, mechanical and AI. Core of the project is a NRF52840 controller with BLE to control and execute all operations related to product. STM32 is to process the voice-AI. ESP32 is for OTA, updating new AI models and sending audio data to cloud.

AUTOMATIC FIRE ALARM CONTROL PANEL 2/4/8 ZONES DIVISON (05/2021 - 01/2022)

- **Company** : Metrix Automation. **Controllers** : STM32F103V6. **IDE**: STM32 Cube. Bare metal.
- **Contribution**: Functional code implementation and testing (Firmware + hardware) for the LCD (16x2) displays, custom keypad, Analog sensors, Timers.
- An automatic fire alarm system-typically made up of smoke detectors, heat detectors, manual call points, audible warning devices, and a fire alarm control with remote notification capability – can provide early warnings of a developing fire. Such a system, however, does not assure protection against property damage of life resulting from a fire.

NOTOUCH SWITCH FOR DOOR INTERLOCKING SYSTEM (06/2020 - 08/2020)

- **Company** : Metrix Automation. **Controllers** : PIC12F675. **IDE** : MPLAB IDE.
- Door Interlock control system is used to prevent the simultaneous opening of multiple doors, actually push button is used for door opening in previously, but now-a-days covid restrictions all clients required contactless, so we develop NOTOUCH SWITCH. These switch is used to access the door by putting your hand near the switch without making any contact.

SKILLS

8, 16 and 32 bit Microcontrollers like STM32F1, STM32F0 and STM32H7 series.

PIC Controllers

Cortex-M4

Cortex-M7

I2C

SPI

QSPI

UART

RS485

Dual core IPC

Timers

PWM

ADC

GPS

Graphical LCD

7Segment display

STM32CUBEIDE

Keil

MPLAB

Bootloader

Oscilloscope

McuXpressoIDE

Logical Analyzer

Embedded C

Adequate knowledge of reading schematics and datasheets for components.

EDUCATION

B.Tech (Electronics and Communication Engineering)
(2016 - 2019)

Vignan Bharathi Institute of Technology (JNTU-H)

Diploma (S.C.N) (2013 - 2016)

Govt Institute of Electronics

LANGUAGES

English

Full Professional Proficiency

Telugu

Full Professional Proficiency