Bharath Kona

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20-8/2-4A/1, Ayodhya Nagar, Vijayawada, AP

Career Objective

A dedicated and innovative embedded systems engineer with a strong foundation in system design and development. Seeking to contribute my skills in embedded architecture, AI/ML, and problem-solving to a forward-thinking organization.

Education

MTech in Embedded Systems 2024 – 2026
Amrita Vishwa Vidyapeetham, Coimbatore, Tamil Nadu CGPA: 8.18/10

BTech in Electrical and Electronics Engineering 2020 – 2024
Amrita Vishwa Vidyapeetham, Coimbatore, Tamil Nadu CGPA: 7.38/10

HSE (11-12 Std) 2018 – 2020
Sri Chaitanya Junior College, Vijayawada, Andhra Pradesh CGPA: 9.32/10

AISSE (10 Std) 2018
KKR Gowtham School, Vijayawada, Andhra Pradesh Grade: 76%

Skills

Programming Languages: C, Python, Embedded C, MATLAB, Simulink, Assembly Language
Tools and Technologies: Arduino, ESP32, Machine Learning, ESP IDF, STM32 Cube IDE, LPC2148
Other Skills: Analytical Thinking, Creative Problem-Solving, Effective Communication

Technical Interests

Microcontroller Programming, IoT Systems, RTOS

Projects

Cardiovascular Disease Classification using Deep Learning Techniques

- Developed and implemented an ECG-based cardiovascular disease detection system using deep learning techniques.
- Collected real-time ECG signals from patients using the AD8232 ECG sensor and Arduino.
- Applied Continuous Wavelet Transform (CWT) to convert 1D ECG signals into 2D scalograms.
- Utilized CNN-AlexNet for classification of cardiovascular disease categories in MATLAB.

Smart Home and Safety System for Elderly and Disabled Using IoT and RFID

- Designed an IoT-based smart home system enhancing security, accessibility, and convenience.
- Integrated RFID-based door locks for automated access control and location tracking.
- Implemented fall detection using accelerometer sensors for emergency response.
- Developed automated lighting and gas leakage detection with GSM alert features.

WiFi-Controlled Smart Floor Cleaner

- Designed a floor cleaning system integrating dry vacuum suction and wet cleaning.
- Implemented WiFi-based remote control using ESP8266.
- Integrated a solar-powered charging station for continuous operation.
- Utilized RS775 motor, DC gear motor, and L298N motor driver for optimized performance.

Language Proficiency

English (Professional), Telugu (Native), Hindi (Conversational)