Vivek R. Chaudhary

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Career Objective

To pursue an entry-level role in Embedded Systems and VLSI, applying skills in Embedded C, C, and Python with hands-on experience in Arduino, STM32, Raspberry Pi, and FPGA-based digital circuits, while contributing to real-world hardware development.

Education

B.Tech (Information & Communication Technology) Pandit Deendayal Energy University (PDEU), Gandhinagar 3rd Year 6th Semester | CGPA: ***7.05.***

Skills

- **Programming:** C, Embedded C, Python (Basics)
- **Embedded Platforms:** Arduino, STM32, Raspberry Pi
- **Digital & VLSI Basics:** FPGA-based digital circuits
- **Software Tools:** STM32CubeIDE, Proteus, Tinkercad
- **Core Concepts:** Sensors, GPIO, UART, PWM, ADC

Projects

Arduino-Based Smart Robotic Car with Ultrasonic and Bluetooth Control :-

- **Description:**
  Designed and implemented an embedded robotic car using Arduino, integrating ultrasonic sensing for obstacle detection and Bluetooth communication for wireless control.
  A motor driver shield was used for efficient DC motor control, enabling both autonomous obstacle avoidance and manual remote operation.
- **Key Skills:**
  Embedded C, Arduino, Sensor Interfacing, Motor Control, Bluetooth Communication.

https://github.com/vivekar217220-del/ using-Arduino-and-Motor-Shield

Design and Simulation of a Custom 8-Bit CPU Using Logisim :-

- **Description:**
  Designed and simulated a complete 8-bit CPU architecture using Logisim, including datapath components such as registers, ALU, control unit, and memory interface.
  The project demonstrates understanding of digital logic design, instruction execution, and basic computer architecture.
- **Key Skills:**
  Digital Logic, CPU Architecture, ALU Design, Control Logic, Simulation.

https://github.com/vivekar217220-del/ Simple-8-Bit-CPU-Design-using-Logisim

Water Level Indicator System Using Discrete Electronic Components :-

- **Description:**
  Developed a simple water level indicator system using LEDs and a buzzer to provide visual and audible alerts at different water levels.
  The project demonstrates fundamentals of electronic circuit design and basic sensing concepts.
  Key Skills:
  Basic Electronics, Sensors, Circuit Design, Prototyping.

https://www.linkedin.com/posts/chaud activity-7406563610442964992-1k5e?utm_source=share&utm_mediun MdoOLE

▼ Workshops & Cources Certification

1. **Atomistic Modelling using Synopsys QuantumATK**
2. **Engineering Essentials Workshop (IEEE)** – Linux, Git, GitHub
3. **FPGA and ML Integration**. (by IEEE)
4. **LLM & AI Workshop** – AI fundamentals
5. **Udemy** = Microcontroller Embedded C Programming.
6. **Core MATLAB Skills** *by MathWorks Training Services*

• Completed a learning path comprising of courses on – MATLAB Desktop Tools and Troubleshooting Scripts, Explore Data with MATLAB Plots, Make and Manipulate Matrices, Calculations with Vectors and Matrices.

7. **Signal Processing Onramp** *by MathWorks Training Services*

• Learned Signal Preprocessing, Spectral Analysis, and Filtering of signals using MATLAB's Signal Processing Toolbox.