Mrinank Gaur

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WORK EXPERIENCE

- **Technocrats Robotics**   *Chennai*
  Robot Programmer   1 yr 5 mos

  – Movement of Octa-directional Bot using Omni Wheels
  – Computer Vision Based Localization Using Aruco Markers
  – Robocon India 2024
  – Technoxian WRC 2023

EDUCATION

- **Vellore Institute of Technology**   *2022-2026*
  Bachelor of Technology in Electronics and Communication Engineering   **CGPA: 8.78/10**
- **The Khaitan School**   *2022-2022*
  Class XIIth   **CGPA: 8.92/10**
- **The Khaitan School**   *2020-2020*
  Class Xth   **CGPA: 9.62/10**

PROJECTS

–**Battle Ship Game** | Made an interactive Battle Ship game in C++ using OOPs concepts.

–**Home Automation System** | IoT based home automation system using esp32

–**Analog Visitor Counter** | Made a counter which counts visitors in an area using OP-Amp comparator and IC 4022

–**8-Axis Omni Wheel Bot** | Made a robot using Omni Wheels that can move in 8 axis with high precision

–**Soldier Tracking System using 8051** | A high precision soldier tracking device that can send latitude and longitude of the soldier using GSM neo6M modulde interfaced to AT89S52 micro-controller. Written using 8-Bit Assembly Language (8051)

–**Noise Reduction in DSP** | Made a MATLAB simulation of adaptive noise reduction using a feedback system

–**RISC V SOC design** | Designing and implementation of a RISC V Processor using Zynq UltraScale+ MPSoC FPGA board with 29 opcodes in the instruction set.

–**AHB to APB Bridge Design** | Designing and implementation of bridge between AHB and APB using VerilogHDL implementing AMBA architecture

–**Multiply Accumulator(MAC)** | Designing and implementation of 4 bit Multiply Accumulator which the performs the action of $Y = AB + CD$. Here Y is an 8 bit register and rest all arr 4 bit registers acting as inputs. This was implemented using hybrid pipelining (register + wave pipelining) for increased clock frequency.

TECHNICAL SKILLS

Languages: Python, R, Java, C, C++, HTML/CSS, Matlab, SQL, x86 Assembly, 8051 Assembly, Shell, Bash, Verilog HDL

Developer Tools: VS Code, IntelliJ, AWS, Keil MicroVision, Cadence Virtuoso, ModelSim

Technologies: GitHub, Linux, ROS2, Excel, Esp32, Arduino, AT89S52, Raspberry Pi

Frameworks: Matplotlib, Numpy, Pandas, Open CV

Softskills: Leadership, Management, Teamwork, Communication, Creative thinking, Analytical & Problem solving

EXTRACURRICULAR

– **Clubs & Sports**

  * Trekking Club
  * Co-coordinated Trek for Trekking Club
  * Participated in intra-college football tournament
  * Completed 5K marathon for Gender Equality