

Rishabh Gupta

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Objective

Curious and driven undergraduate student pursuing **Computer Science Engineering**, with a strong foundation in **programming**, **data structures**, and **software development**. Keen to explore the intersection of *Artificial Intelligence*, *Machine Learning*, and **embedded systems**, with a passion for **integrating intelligent software with hardware solutions**. Seeking opportunities to gain **hands-on experience** and contribute to **innovative, real-world projects**.

Education

Vellore Institute of Technology, Vellore, India

Bachelor of Technology in Computer Science and Engineering
CGPA: 9.21

2023 - 2027

Matoshri Junior College, Mhasrul, Nashik

Higher Secondary Certificate (HSC)

Passed in 2023

Wisdom High International School, Nashik

International General Certificate of Secondary Education (IGCSE)

Passed in 2021

Projects

Robotic Arm with Joystick Control

- Designed and built a robotic arm system using an **Arduino Mega** and multiple **servo motors**.
- Implemented dual **joystick controls** for real-time manual actuation of arm movements.
- Developed custom code to ensure **smooth and responsive motion**, handling PWM signals and angle calibration.
- Focused on **hardware-software integration**, ensuring reliable communication between input devices and motor drivers.

Manoeuvre | Rover with Gripper

- Designed and developed a custom-built rover with a **servo-actuated gripper** for object manipulation tasks.
- Integrated **motor drivers**, **servo motors**, and **joysticks** to enable remote navigation and gripping control.
- Programmed control logic for efficient movement over variable terrain and accurate object handling.

Team Experience

Team Veloce — Member

2024 – Present

- Member of Team Veloce, VIT's premier technical team specializing in robotics and embedded systems development.
- Worked on mechatronics-focused projects such as a **line-following robot** and the **Manoeuvre rover**, contributing to both mechanical design and embedded programming.
- Designed and integrated systems involving microcontrollers, motor drivers, sensors, and actuators.
- Gained hands-on experience with **hardware-software integration**, control logic, and real-time embedded systems.

Technical Skills

Languages: C, C++, Java, Python, JavaScript, HTML , CSS

Technologies: VS Code, Arduino IDE, PyCharm, GitHub

Frameworks & Libraries: React, Pandas, NumPy

3D Processing Tools: MeshLab

Soft Skills

- Strong **communication** and **teamwork** skills.
- Excellent **problem-solving** and **time management**.