

Ved Pusalkar

Pune, Maharashtra, India | +91-9987501769 | vvpusalkar@gmail.com | [LINKDIN](#) | [GITHUB](#)

Education

MIT ADT University

B.Tech in Mechanical Engineering, Specialization in AI & Robotics – CGPA: 8.06

2023 – 2027 (Expected)

Pune, India

Bhavan's H.S. Junior College

Higher Secondary (12th) – 58.50%

2023

Mumbai, India

Antonio DeSouza High School

Secondary School (10th) – 80.60%

2021

Mumbai, India

Projects

Gesture-Controlled Robotic Arm

Mentor: Prof. Dr. Anurag Nema | Team Size: 4

Aug 2025 – Dec 2025

Python, OpenCV, Fusion 360, 3D Printing, Arduino

- Designed and developed a gesture-controlled robotic arm using **OpenCV** and **Python** to replace joystick/manual control with real-time hand-gesture recognition via webcam
- Modeled the arm in **Fusion 360** and manufactured components using **3D printing**; integrated servo motors with **Arduino** for motion control
- Improved gesture-detection accuracy and calibrated the arm's response through iterative software tuning, resolving latency and precision issues
- Applied computer vision, embedded control, and CAD design together, bridging software and mechanical subsystems in a functional robotics prototype
- [Project Documentation](#)

Design and Development of an Air Cushion Vehicle (Hovercraft)

Mentor: Prof. Dr. Anurag Nema | Team Size: 3

June 2024 - May2025

CAD, CAM, FEA, Fusion 360

- Designed a lightweight, low-friction all-terrain hovercraft in **Fusion 360**, iterating from an initial 4-motor lift configuration to a redesigned, more efficient model
- Identified performance limitations (high power draw, excess weight, poor efficiency) in the first design through thrust and battery calculations, then re-engineered the chassis and motor selection
- Delivered a working prototype by applying an iterative design process, reinforcing skills in **CAD modeling**, **FEA**, and engineering trade-off analysis
- [Project Documentation](#)

Technical Skills

Programming: Python
CAD: Fusion 360, SolidWorks, Creo
CAE / Simulation: ANSYS
Other Tools: OpenCV, Arduino, 3D Printing

Certifications

- **Product Design and Development** – NPTEL (Silver Certificate)
- **SolidWorks and ANSYS** – Phakatkar Academy