Akshay S. Mhatre

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Summary

A Future VLSI Designer who is very passionate about chip design, on which the entire world operates. Highly committed to building something possible for the future through knowledge and innovation. I am focused on being better every day, learning every day, and wanting to contribute to future imagination..

Education

Bachelor's of Engineering in Electronics and Computer Science Mar 2023 - 2026
Vidyalankar Institute of Technology, Mumbai, Maharashtra, India *Pursuing*

Diploma of Engineering in Electronics Mar 2020 - 2023
Veermata Jijabai Technical Institute, Mumbai, Maharashtra, India *73 Percent*

Projects

Basic 8051 Microcontroller Programming Board (Copyrighted) May 2025 - July 2025

- Developed a PCB-based product for learning and prototyping with the 8051 microcontroller.
- Features built-in clock, reset, LEDs, push buttons, and expansion headers for interfacing.
- Supports ISP programming for fast code upload, debugging, and efficient embedded system development.

3D Industrial Multi-Axis Robotic Arm Feb 2025 - Mar 2025

- Designed and modelled every precise component using Fusion 360.
- Engineered for industrial applications with high accuracy and flexibility.
- Showcases advanced robotics and CAD expertise for automation solutions.

Piezo Electric Speed Breaker and Speed System Jan 2025 - 2025

- Revolutionizing India's highway network with an innovative energy-harvesting speed breaker.
- Designed and 3D-printed a fully functional prototype to demonstrate real-world feasibility.
- Enhances road safety while generating sustainable power from vehicular movement.

Wall Crack Detection Using Drone Sep 2024 - Nov 2024

- Engineered a fully autonomous drone using the Pixhawk flight controller.
- Integrated GPS and telemetry for real-time tracking and precision inspection.
- Optimized for efficient structural monitoring, reducing manual labour and costs.

Wireless Key System for Automobile Vehicles Jan 2023 - Mar 2023

- Developed a smart vehicle access system using RFID, wireless keys, and a mobile app.
- Implemented flame sensors for enhanced safety and keyless vehicle control.
- Seamlessly integrates modern security with convenience in automobile technology.

Footstep Power Generation Sep 2022 - Nov 2022

- Built an industrial-grade prototype harnessing energy from human footsteps.
- Incorporated piezoelectric tiles and a backup battery for efficient energy storage.
- Provides an eco-friendly power solution for smart cities and public infrastructure.

Experience

VLSI Summer Internship – VJTI, Mumbai May 2025 - July 2025

- Designed circuits in Cadence Virtuoso and learned Verilog HDL.
- Completed NPTEL course on CMOS Digital VLSI Design.
- Gained hands-on ASIC design and EDA tool experience.

Grok Learning Pvt Ltd. - Internship Dec 2024 - Mar 2025

- Designed a robotic arm, engineering components, and project prototypes using Fusion 360 software.
- Created detailed engineering drawings and job cases for industrial use cases.
- Successfully 3D-printed all designs, ensuring functionality and manufacturability.

RailTel Corporation of India Ltd. - Internship June 2022 - July 2022

- Gained hands-on experience in networking, troubleshooting, and telecom infrastructure.
- Managing the connectivity issues, ensuring seamless telecom operations at the Mahalaxmi site.
- Understand effective optical cable management strategies for improved network reliability.

Microcontroller Architecture and Applications - Course Internship July 2024 - July 2024

- Completed an 8-day hands-on training at Wadhwani Electronics Lab, IIT Bombay.
- Learned to program and interface various components using the AT89C51 microcontroller.
- Gained practical experience in microcontroller architecture and embedded system applications.

Chairperson, IEEE-VIT Student Branch June 2024 - Oct 2025

- Leading a diverse team to organize technical events, workshops, and innovation-driven initiatives.
- Overseeing strategic planning, team coordination, and collaboration with industry professionals.
- Fostering an inclusive environment for learning, leadership, and professional development.

Advisor, V Clubs Nov 2024 - Present

- Mentoring students in budget planning, goal setting, and disciplined work ethics.
- Guiding teams in project development and preparation for competitions..
- Providing strategic insights for future initiatives, workshops, and skill-building activities.

Achievements

SPIT Hardware Hackathon 2025: 11th Rank among 584 Participants. Feb 2025

Toyota Hardware Hackathon 2025: 6th Rank among Top 30 Teams. (Mentor) Jan 2025

CIIA Project Exhibition 2025: Selected in Top 100 Among 728 Applications. Feb 2025

3D Design and Printing Workshop: Speaker and Conducted for 30+ Students. Jan 2025

Robotic Workshop 2024: Speaker and Conducted for 40+ Students Sep 2024

Semix Annual Summit 2024: Student Attendee Nov 2024

IEEE Education Student and Young Professionals Congress Award: Best Poster Aug 2024

DGCA Drone Remote Pilot: DGCA Approved Licensed Pilot. Jun 2024

Sea Cadet Corps: Ex-Ordinary Cadet May 2015 - May 2019

Youtube Channel: Electronics Projects Nov 2020 - Present

Marathon Runner: Completed 21km Tata Marathon Jan 2024

National Waterpolo Player: 2nd and 3rd Medalist Nov 2021 - June 2023

Skills

Software Skills	Cadence, Vivado, Fusion 360, EasyEDA, Multisim, LTspice, Proteus and Keil.
Leadership Skills	Observation, Thinking, Delegation, Team Building, Communication and Planning.
Hardware Skills	Soldering, PCB Designing, ESP, Drone Licensed Pilot, 3D Printing, Robotics.