Saurabh Desai

BTech in Mechanical Engineering | VJTI

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Education

•Veermata Jijabai Technological Institute (VJTI) *2021-2025*

BTech Mechanical CGPA: 7.51 (2023)

•Balasaheb Desai College, Patan *2019-21*

Higher Secondary Education, Maharashtra Percentage: 96% (2021)

Experience

•Summer Intern

Kirloskar Oil Engines Ltd., Pune June-Aug. 2024

– Interned at KOEL, Pune in the NVH Department within the Research and Development division.
– Developed a standard procedure for the Hydro-Pulsation test of Oil Filters, improving testing efficiency.
– Gained practical experience in vibration and noise testing and in data analysis,enhancing technical skills..
– Gained knowledge about engine components and their manufacturing, development,and working of the industry.

• Vishwa, VJTI (Astronomy club)

Rover Suspension subsystem Lead March 2023 -Feb.2024

– Gained expertise in 3D modeling (SolidWorks) and analysis Fusion 360, Ansys).
– Hands-on experience in CNC machining, 3D printing, laser cutting, and precise operation of various equipment.
– Collaborated with a multidisciplinary team, improving problem-solving capabilities and communication skills.

Projects

•Weed Control Farming Robot *Feb. 2024*

Designed a 3D model of a weed control robot using SolidWorks.

– Engineered a robust four-wheel-drive system integrated with a chain drive mechanism for optimal mobility.
– Designed a weed control mechanism featuring cutting blades, motors with linear actuators for precise height control

•Mars Rover Prototype *Aug-2023*

Participated in IRC Mars Rover Prototype Competition as a key member of the Mechanical Subsystem team.

– Worked on the suspension system of the rover, desiged a Holonomic drive system and wheels in SolidWorks.
– Performed component analysis using Ansys and Fusion 360 software.
– Manufactured the designed parts, conducted assembly, and tested the components.

•Multimodal Drone *June-2022*

Developing a dual-mode drone (flight and drive) for versatile, stealth-based surveillance and search missions.

– Designed and 3D printed a dual-mode drone (drive and fly) using SolidWorks and carbon fiber PLA.
– Integrated Teensy 4.0, actuators, and 16-ch Radiomaster for transformation; analyzed structure in Ansys.

Technical Skills

•Software's: SolidWorks, Ansys, AutoCad, Fusion 360, Ultimaker Cura, RoboAnalyzer

•Programming Languages: C++

Publication

Saurabh Desai, "Optimized Design of a Motorcycle Disc Brake Plate Through Material Selection and Weight Reduction," *ATSMDE 2024*, Mumbai, India, Dec 2024.

Relevant Courses

•Robotics Machine Design Automotive Data Science and Data Analytics Thermodynamics

•Industry 4.0 and IIOT Finite Element Analysis Operations Management Mechanical Vibrations

Achievements

–**Joint Entrance Examination (JEE Advanced)** AIR 22089 *2021*
–**International Rover Challenge** Ranked 16th *2024*

Positions of Responsibility

–**Mechanical Subsystem Member** Vishwa, VJTI (Astronomy club) *Nov. 2022 - Present*
–**Member of Power Transmission sector** VJTI Racing *March 2022 to June 2023*
–**Operations Executive** Technovanza,VJTI *Aug. 2022 to June 2023*