JEHAN BIRDY

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EDUCATION

Bachelor of Technology in Mechanical Engineering **July' 21 – May' 25**
K.J. Somaiya College of Engineering | Mumbai, India Current CGPA: 8.38/10
Master of Science in Aerospace Engineering **Aug'25-Present**
University of Southern California | Los Angeles, U.S.A.

SKILLS AND TOOLS

Design and Analysis Software: SolidWorks, Ansys, Fusion 360
Data Analysis Software: Simulink, MATLAB
User Interface Software: Canva, Figma

EXPERIENCE

Intern, *Bajaj Auto* | Pune, India **Jun' 24**

- Collaborated with the Manufacturing Engineering team at Chakan Plant-1 to optimize assembly lines by conducting a detailed analysis of processes and evaluating Poka Yoke tool applications to reduce errors and enhance efficiency.
- Created a comprehensive report on the current assembly line layout and existing Poka Yoke tools, recommending new tools with conveyor belt interlocking integration to improve process flow and minimize defects.

Designer, *Formula Student Team, Orion Racing India* | Mumbai, India **Jan' 22 - Jun' 23**

- Designed and manufactured vehicle chassis for multiple domestic and international Formula Student competitions, partnering with senior team members to learn the complete process of building a Formula 1 style single-seater car.
- Used SolidWorks to design the chassis while ensuring compliance with all competition rules and regulations.
- Coordinated the source materials including AISI 4130 tubes for the space frame chassis and battery cells for the battery pack, and managed manufacturing processes such as cutting, spot-welding, and anodizing chassis.

Intern, *BETIC Lab of IIT Bombay* | Mumbai, India **Jan'25 - May'25**

- Contributed to the development of medical devices by applying user-centric design through collaboration with biomedical engineers and clinicians, generating design concepts, creating 3D CAD models in SOLIDWORKS, and producing functional prototypes/components via 3D printing and CNC machining.
- Worked on multiple projects including the Scalp Cooling Cap, Diabetic Foot Sensor, and Tracheostomy Tube, with a focus on rigorous testing, particularly for the Scalp Cooling Cap to ensure reliable and error-free operation.
- Designed user interface screens using Figma, enhancing usability and aligning with device functionality.

Intern, *Careflex Private Limited* | Mumbai, India **Jun'25 - Jul'25**

- The internship focused on a large number of mechanical aspects associated with the development of reusable casts designed for wrist fractures.
- Designed and implemented systems and tools to improve manufacturing, including a setup for efficient cast testing to detect deformations or defects and molds for silicon pouring at connector sites.
- Manufactured a 2D CNC machine using a mixture of aluminum extrusion tubes and 3D printed components for embedding heating elements, aimed at achieving manufacturing self-sufficiency.

Designer, *USC Racing Team* | Los Angeles, USA **Sep'25 - Present**

- I joined the Aerodynamics sub-team of USC Racing and have begun work on designing front wing whiskers to limit the wind turbulence from the front wing on the rear wing.

COMPETITIONS AND ACADEMIC PROJECTS

MathWorks Parrot Mini-Drone Competition – Team Vulcan **Aug'24**

- Developed a system using MathWorks software to enable a Parrot Mini Drone to autonomously track and follow a red line, stopping at a designated termination point marked by a red circle, utilizing camera input for navigation.

Academic Projects

- Built a solar-powered mobile charger as part of a project focused on sustainability.
- Collaborated with a team of 4 to design and 3D print a battery-operated snake robot for surveying pipes and accessing tight spaces.

CERTIFICATE COURSES

Organic Solar Cells Theory and Practice | Simulink On-Ramp; Robotics: Computational Motion Planning | Robotics: Perception | SOLIDWORKS CAD Design Associate | SOLIDWORKS CAD Design Professional | Design for Additive Manufacturing | 3D CAD Fundamental | Introduction to Acoustics | Model-Based System Engineering