Abhishek Bhosale
Master of Technology
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PROFILE

Dynamic and results-driven professional with a robust background in mechanical engineering and research. Proven expertise in collaborating with cross-functional teams to gather technical and commercial information for bid preparation. Adept at developing detailed cost estimates and pricing strategies, ensuring profitable outcomes. Demonstrated leadership in managing projects and driving business growth through strategic planning and client Engagement.and Relationship Management.

EDUCATION

- **Veermata Jijabai Technological Institute (VJTI), Mumbai** — Pursuing : Aug 2023 – June 2025
  Master of Technology : Defence Technology (Aerospace Technology Specialization) — CGPA: *7.5*

- **J. S. P. M (Narhe), Pune** — Passed : Aug 2018- June 2022
  Bachelor of Engineering : Mechanical Engineering — CGPA : 8.6

TECHNICAL SKILLS AND INTEREST

Design & Engineering Tools:

- **CAD (Computer-Aided Design):** SolidWorks, AutoCAD, SolidEdge, CATIA V5
  (3D modeling, Sheet Metal Design and Assembly Optimization.)

Simulation & Analysis:

- **CFD (Computational Fluid Dynamics):** ANSYS Fluent & CFX.
  (Fluid Flow analysis, Thermal & Heat Transfer Analysis, Aerodynamic Analysis, Multiphase Flow Analysis)
- **FEA (Finite Element Analysis):** HyperMesh & ANSYS.
  (Structural Analysis, Stress Analysis, Fatigue Testing)

Language & Libraries :

- **Python** (NumPy, SciPy, Matplotlib)

Fundamental Theories :

-Strength of Materials
-Thermodynamics
-Fluid Mechanics & Hydrodynamics
-Propulsion

EXPERIENCE

- **Bharat Forge Limited** — July 2024 – June 2025
  M. Tech Project Intern - Research & Development — *Pune*

Project Name – Hydrodynamic Performance Assessment of Autonomous Underwater Vehicle with Hull and Airfoil Optimized Design

- Focuses on research and development for underwater vehicles.
- Assisted in design, CAE simulations, and optimization of mechanical components, contributing to detailed cost estimates.
- Conduct thorough calculations to ensure safety and operational standards in maritime defence technology.
- Collaborated with internal teams to gather technical and commercial information for bid preparation.
- Engaged in research and development for the MRAUV project, enhancing advanced underwater vehicle technology.

- Jayashree Enterprises May 2022 – July 2023

Trainee Design Engineer *Pune*

Project Name – Automation-Based Sheet Metal & Part Modeling Design for Industrial Applications

-Assisted in mechanical design projects using CAD software, ensuring precision and adherence to specification.

- Collaborated with engineering team to develop and test innovative mechanical solutions.

- Specialized in sheet metal design using SolidWorks, creating detailed and accurate models for manufacturing.

- Supported the creation of technical documentation and reports for design validation and implementation.

PERSONAL PROJECT

Automatic Weight Separation Machine

- Conceptualized & designed an automated weight-based separation system for industrial applications.
- Developed 3D CAD models & assemblies using SolidWorks, to optimize the machine structure.
- Performed FEA analysis (Stress) using ANSYS to ensure structural integrity under dynamic loads.
- Optimized mechanical components such as conveyor mechanisms, levers, and separators for better efficiency.

CFD Analysis of Flow Over Cascade Airfoils

- Performed CFD simulations using ANSYS CFX to analyze airflow over cascade airfoils.
- Implemented turbulence models (k-ε, k-ω SST) to study boundary layer behavior and vortex formation.
- Optimized blade spacing & angle of attack, Pressure Distribution to improve aerodynamic efficiency in turbo machinery

CFD Simulation on Convection Heat Transfer and Heat Flux to Steady-state Thermal Analysis.

- Performed Computational Fluid Dynamics (CFD) simulations using ANSYS Fluent
- To get the temperature distribution, heat flux vectors on walls to understand to heat transfer intensity and direction.

Structural Integrity Assessment of an AUV Hull

- Simulated hydrostatic and dynamic pressure loads to assess the hull's performance under varying underwater depths.
- Simulated external impact loads and shock resistance to determine the hull's ability to withstand underwater collisions**.**
- Performed mesh refinement & convergence studies to ensure accurate numerical simulations.

HOBBIES

- Meditation
- Gardening
- Running
- Reading & Researching