

Himanshu Ashish Desai

Email: hadesai455@gmail.com | Phone: +1 4705963005 | LinkedIn: Himanshu-Desai | Portfolio: Himanshu-myfolio



EDUCATION

Georgia Institute of Technology
Master of Science | Aerospace Engineering

August 2025 – Present

Vellore Institute of Technology, Vellore
Bachelor of Technology | Mechanical Engineering | CGPA – 3.880/4.0

September 2020 – August 2024

Delhi Public School Vadodara
Higher Secondary Certificate (HSC) | Class 12: PCM | Percentage – 92.4/100

April 2018 – March 2020

WORK/INTERNSHIP EXPERIENCE

Reliance Industries Limited (Jamnagar, Gujarat, India)
Pre-Placement Offer (PPO) | Assistant Manager (Shift Field Engineer)

August 2024 – May 2025

- Received Pre-Placement Offer with a **rating of 4.7/5** during the internship
- Placed at Domestic Tariff Area (DTA) – Captive Power Plant (CPP) – Mechanical Operations
- Responsibility – Look after the operation of **Gas Turbines (GTs)**, **Steam turbines**, boilers, and Heat Recovery Steam Generators (HRSGs).
- Was in charge of **4 out of 14 Frame 6B and Frame 9E GTs** (Manufactured by GE Vernova) at CPP.
- Worked on modified GTs capable of running on synthetic gas with **17-stage compressor** and **3-stage Turbine**.
- Designed plot plan** for commissioning of **2 new combined cycle GT-HRSG systems** at CPP.
- Managed **5 field engineers** and **3 contractor teams** working on rotary components of the plant

Shutdown Maintenance Engineer | DTA – CDU-1

March 2025 – April 2025

- Worked at the DTA – Crude Distillation Unit – 1 (**CDU-1**) under the **Heater and Heat Exchangers team**.
- Executed maintenance work for **3 crude heaters** and **90 shell & tube heat exchangers** and related equipment.
- Managed the operating team of the **Sarens Liebherr LR1300** Crawler Crane, working on crude heater maintenance.
- Supervised **12 hotwork contractor teams** for cutting, grinding and welding jobs on heat exchangers and heaters.

Internship | Central Engineering Services (CES)

May 2023 – July 2023

- Challenge – Mechanical Component Failure
Action – On-Site Inspection, Condition Monitoring & Vibration Analysis
Results – Predictive along with Preventive Maintenance

Associated Power Structures Limited (Vadodara, Gujarat, India)

Internship | Vocational Trainee

June 2022 – July 2022

- Challenge – Understanding lifecycle, installation, and load-bearing standards in transmission towers
Action – Assisted in site surveys, structural design, welding, and galvanizing processes
Results – Learned end-to-end workflows, quality control

Shakun Polymers Limited | Orbia Group (Halol, Gujarat, India)

Internship | Manufacturing

May 2022 – June 2022

- Challenge – Understand manufacturing polymer pallets as secondary products
Actions – Site Visit, Study the working of Bühler Palletizing System
Results – Knowledge on Polymer Manufacturing Technology

Kodacy | SPACE (Remote)

Internship | Robotics

December 2021 – January 2022

- Challenges – Building 4 different Tasking Robots
Action – Virtual Assembly Simulation of Components and Coding for Microcontroller
Results – Created Signal Bot, Sound Sensor Bot, Path Following Bot, Motion Sensor Bot

RESEARCH EXPERIENCE

Numerical Analysis on Scramjet Combustor (Under Review: IJHE)

January 2024 – August 2024

Dr. Padmanathan P. | Vellore Institute of Technology, Vellore

- Analysed performance and combustion characteristics of a **Scramjet Combustor** with diamond strut-based injectors.
- Designed **14 combustor models** on **SOLIDWORKS** and created detailed block-structured mesh using **ANSYS ICEMCFD**.
- Carried out **validation** using Michael Oevermann's experimental research on triangular strut-based scramjet model.
- Improved **combustion efficiency** by **6.43%** compared to baseline validation model.

SKILLS AND COMPETENCIES

Technical Skills – CAD/CAM/CAE | Finite Element Analysis | Computational Fluid Dynamics | Thermal Fluid Systems | Mechanical Maintenance and operations | Manufacturing and Production | FDM, SLM 3D Printing | Materials and Testing | Lean Manufacturing Technology & Six Sigma
Software – AUTODESK AutoCAD | AUTODESK Fusion 360 | SOLIDWORKS | ADAMS | ANSYS Fluent, Thermal, Static Structural and modal | ANSYS ICEMCFD (Meshing Tool) | OpenFoam | MATLAB/SIMULINK

Management – Total Quality Management & Reliability | Industrial Engineering Management | Operations Research

Soft Skills – Problem-Solving and Analytical Thinking | Communication Skills | Teamwork | Flexibility and Adaptability

Coding Languages – Java (OOP & DSA) | C++ (basics) | HTML/CSS/JS (Front End Dev.)