

# SAHIL T CHAUDHARY

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## EDUCATION

### Carnegie Mellon University

Pittsburgh, PA

Master of Science in Mechanical Engineering – Applied Advanced Study

December 2024

- **Current coursework:** Modern Control Theory, ML and AI for Engineers, Robot Dynamics and Analysis

### Vellore Institute of Technology

Vellore, India

Bachelor of Technology in Mechanical Engineering

August 2022

- GPA: 9.05/10

## SKILLS

**Programming Language:** Python | C++ | MATLAB | R

**Tools/Technology:** SolidWorks | Ansys | Fusion 360 | CoppeliaSim (V-REP) | Raspberry Pi | Arduino Uno | Git

## PROFESSIONAL EXPERIENCE

### ArcelorMittal Nippon Steel India Limited

Hazira, Gujarat, India

Graduate Engineer Trainee – Corex Operations

June 2022 – March 2023

- Ensured the smooth running of different processes such as conveyors, skip charging, coal blending, coal drying, slag granulation plant, and machinery involved in all the areas within Material Handling and the Corex Process
- Assisted and collaborated with Field Engineers to resolve problems such as malfunctioning, errors or issues with the equipment and machinery, ensuring safety, and productivity of the Plant

### Maruti Suzuki India Limited

Gurgaon, Haryana, India

Intern – Energy Control Department

July 2021 – September 2021

- Trained in Energy Auditing and Management, and thereby prepared a report on the same
- Learnt evaluating the performance of Boilers, improving their efficiency, and identifying energy conservation opportunities

## ACADEMIC PROJECTS

### Re-sizeable Autonomous Cleaning Robot [\[GitHub\]](#)

January 2022 – April 2022

Vellore Institute of Technology

Vellore, India

- Designed and developed a Cleaning Robot that can re-size itself (between 30 cm and 50 cm length), using Fusion 360
- Conducted a simulation study using Ansys and CoppeliaSim (V-REP)
- Developed a physical prototype using Raspberry Pi 4, and programmed it using Python

### Quadruped Robot [\[GitHub\]](#)

June 2021 – October 2021

Vellore Institute of Technology

Vellore, India

- Designed a Quadruped Robot with SolidWorks, by redesigning the legs with RRR configuration to increase total workspace
- Obtained the stable workspace of the robot with the redesigned legs using MATLAB
- Incorporated trot and canter gaits using Python, and performed simulation using PyBullet

### Prosthetic Arm [\[GitHub\]](#)

January 2021 – April 2021

Vellore Institute of Technology

Vellore, India

- Fabricated a cost-effective Prosthetic Arm using SolidWorks, Arduino Uno and 3-D printing (using ABS)
- Reduced the material cost of the Prosthetic Arm by 18% using Topology Optimization
- Programmed the arm using Electromyography Sensors and C++

### Compact Foldable Treadmill [\[GitHub\]](#)

August 2020 – November 2020

Vellore Institute of Technology

Vellore, India

- Designed an easy to store, compact, and foldable Treadmill using SolidWorks
- Conducted Stress Analysis with Ansys, to determine the Fatigue Life, and got a Factor of Safety of 4

## EXTRACURRICULAR ACTIVITIES

### National Cadet Corps

July 2019 – April 2022

Selected as a Cadet in VIT-NCC (National Cadet Corps) for Republic Day and Independence Day Parade Contingent

### SAE-VIT

January 2019 – April 2022

Joined as a Core Member of SAE-VIT student chapter, and hosted Tech Talks, gathered sponsorships for Automobile workshop, IDRL and Aerodominator events, and obtained components for Aeromodelling Workshop by SAE-VIT