

# Aditya Abishai Pedapati

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## EDUCATION

### NEW YORK UNIVERSITY

MS IN MECHATRONICS AND  
ROBOTICS

May 2025 | New York, US

### VASAVI COLLEGE OF ENGINEERING

BE IN MECHANICAL ENGINEERING  
WITH DISTINCTION

May 2023 | Hyderabad, India

## LINKS

Github:// [abixxvii](#)

LinkedIn:// [Abishai A](#)

## COURSEWORK

### GRADUATE

Mechatronics

Mathematics for Robotics

Foundations of Robotics

Advanced Mechatronics

Robot Localisation and Mapping

Entrepreneurship

(*Notable Achievements*)

Recipient of merit based scholarship

### UNDERGRADUATE

Thermodynamics and Heat Transfer

Fluid Mechanics

Machine Learning

Programming

CAD, CAM and CFD

Engineering Mathematics

Finite Element Analysis

Kinematics and Dynamics of Machines

Manufacturing Methods

Automobile Engineering

(*Notable Achievements*)

Recipient of the best project award

## SKILLS

### PROGRAMMING

MATLAB • Shell • Python • C

C++ • Git •  $\LaTeX$

### ROBOTICS AND MACHINE LEARNING

CoppeliaSim • MuJoCo • PyTorch • ROS •

OpenCV • Numpy

### CAD AND SIMULATION TOOLS

SolidWorks • Siemens NX • Fusion 360 •

CATIA • Ansys Fluent • Ansys Workbench

• Lotus Shark • Inventor

## EXPERIENCE

### NYU'S PROJECT MJOLNIR | MECHANICAL DESIGN ENGINEER

Oct 2023 - Present | New York, NY

- Working with an international team to optimize an **adaptive mountain bike** for wheelchair users
- Integrated quick release levers on backrest and footrest for ease of use

### KIA INDIA PVT LTD | PROJECT INTERN

Feb 2023 – May 2023 | Ananthapur, India

- Interned in the vehicle quality control department in the plant with a capacity to produce over 300,000 cars annually
- Played a pivotal role in redesigning and optimising KIA Carens.
- Worked along with industry leading engineers and researchers to bring down the defects per unit (DPU) below one(1)
- Analyzed the defects on vehicles by implementing RCA and drafted an approach to reduce the defects
- Optimized KIA Carens by redesigning the tailgate and improving the structure of Body in White (BIW) in record time

### RE SUSTAINABILITY | ENGINEERING INTERN

Jul 2022 – Aug 2022 | Hyderabad, India

- Interned at the South India's largest waste to energy conversion plant which produces 28 MW of RDF by consuming 1,200 tons of waste per day
- Developed an approach to utilise drones to spray 75 lts of liquid odorite to keep the stench in check

### IIT MADRAS RESEARCH PARK | PROJECT INTERN

April 2022 – July 2022 | Chennai, India

- Spearheaded a team of five to design and build an autonomous cotton crop harvester under the guidance of Dr. Shital Chiddarwar
- Modeled a robot by integrating mecanum wheels, placing a 6 DOF robot and improving the payload capacity

## PROJECTS

### DRIVER DROWSINESS DETECTION SYSTEM Jan 2024 | NY, US

Working on developing and implementing a drowsiness detection system by leveraging computer vision and machine learning techniques to improve road safety

### EXPLORATION OF ROBOTIC SWORD KINEMATICS Nov 2023 – Dec 2023 | NY, US

Led the development and analysis of a unique robotic platform inspired by the plant machete, overseeing the implementation of essential functionalities like Forward Kinematics, Inverse Kinematics, and Visualization.

### SONARDUINO Oct 2023 – Nov 2023 | NY, US

Developed a **360 degree radar system** for object detection. Enhanced the capabilities of locomotive robots by providing SonarDuino which helps in object detection.

### ANALYSIS OF COOLING OF A GAS TURBINE BLADE Jan 2023 – June 2023 | Hyderabad, India

Solid modeled gas turbine blades of NACA 65 series. Analyzed the cooling of the blades by varying different properties such as material, cross-section, number of holes, type of fluid, etc.