

# 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](#)

Website:// [abixxvii.github.io](#)

## COURSEWORK

### GRADUATE

Mechatronics

Mathematics for Robotics

Foundations of Robotics

Advanced Mechatronics

Robotic Gait and Manipulation

Entrepreneurship

(Notable Achievements)

Recipient of merit based scholarship

## TECHNICAL SKILLS

### PROGRAMMING LANGUAGES

C++ • C • Python • MATLAB • Shell  
scripting

### ROBOTICS AND FRAMEWORKS

ROS (Robot Operating System) • Gazebo

• CoppeliaSim • MuJoCo

### SIMULATION AND MODELING

SolidWorks • Siemens NX • Fusion 360 •

CATIA • Ansys Fluent • Unity3D

### MACHINE LEARNING

PyTorch • OpenCV • JAX • OpenAI Gym

### VERSION CONTROL

Git

### MICROCONTROLLERS

Arduino • Espressif ESP32 • Raspberry Pi

### OPERATING SYSTEMS

Linux • Mac OS • Windows

### OTHER TOOLS

LaTeX • Microsoft Office Suite • Adobe  
Creative Suite

### MANUFACTURING

CNC Machining • 3D Printing •

Additive Manufacturing • Subtractive

Manufacturing

## EXPERIENCE

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

Oct 2023 - Present | New York, NY

- Worked with an international team to optimize an **adaptive mountain bike** for wheelchair users.
- Developed quick release shaft collars 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, overseeing production for 300,000+ cars annually.
- Played a key role in KIA Carens redesign, emphasizing intricate mechanical assemblies with GD&T application and optimizing the BIW (Body in White) and the weatherstrip.
- Collaborated with industry-leading engineers, achieving a defect per unit (DPU) reduction to less than one.
- Analyzed vehicle defects, implemented Root Cause Analysis (RCA), and drafted effective defect reduction strategies.

### RE SUSTAINABILITY | ENGINEERING INTERN

Jul 2022 - Aug 2022 | Hyderabad, India

- Spearheaded initiatives at the largest waste-to-energy plant in South India, overseeing the production of 28 MW of RDF from 1,200 tons of daily waste.
- Innovatively implemented drone technology to efficiently spray 75 liters of liquid odorite, effectively mitigating unpleasant odors.

### IIT MADRAS RESEARCH PARK | PROJECT INTERN

April 2022 - July 2022 | Chennai, India

- Led a dynamic team of five in the design and construction of an autonomous cotton crop harvester, guided by Dr. Shital Chiddarwar.
- Engineered a robot with integrated mecanum wheels, a 6 DOF configuration, and enhanced payload capacity.

## PROJECTS

### MUJOCO SIMULATION OF ROBOTIS OP3 FOR ENHANCED DYNAMICS AND PERFORMANCE

Feb 2024 | NY, US

Leading the development of an advanced simulation environment using the MuJoCo (Multi-Joint Dynamics with Contact) simulator, specifically tailored to the Robotis OP3 robot.

### 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.

### 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.