

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

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 • OpenAI Gym

CAD AND SIMULATION TOOLS

SolidWorks • Siemens NX • Fusion 360 •

CATIA • Ansys Fluent • Ansys

Workbench • Unity 3D • Inventor

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.