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
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.