Aditya Abishai Pedapati

7032 4Av Brooklyn, New York, NY 11209
+1 (929) 643 9616 abishai.aditya@nyu.edu https://www.linkedin.com/in/abishai-a-a4921925

Education

New York University **September 2023 – May 2025**
Master of Science in Mechatronics and Robotics *New York, US*

Vasavi College of Engineering **August 2019 – May 2023**
Bachelor of Engineering in Mechanical Engineering with distinction *Hyderabad, India*

Experience

Project Mjolnir, NYU **October 2023**
Design Engineer *New York, US*

- 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 **February 2023 – May 2023**
Project Intern *Ananthapur, India*

- Interned in the vehicle quality control department in the plant with a capacity to produce over 300,000 cars annually.
- 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.
- Reprogrammed the assembly bot.

RE Sustainability **August 2022 – September 2022**
Intern *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 **April 2022 – July 2022**
Project Intern *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 **December 2023**

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

Exploration of robotics sword kinematics **November 2023**

- 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.
- Additionally, integrated advanced features including Inverse Dynamics with the Jacobian, Inverse Kinematics with the Jacobian, Workspace Computation, and Trajectory Optimization, showcasing problem-solving abilities.

SonarDuino **November 2023**

- 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 **April 2023**

- 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.

Temperature Monitoring System **February 2023**

- Built a temperature monitoring system using LM35 and ESP 12E.This notifies the user by SMS or mail when the temperature crosses the threshold.

Technical Skills

Programming Languages: Python, C++, C, MATLAB, LATEX, Rust
CAD and Simulation Tools: SolidWorks, CATIA, Siemens NX, Fusion 360, Inventor, Ansys Fluent, Ansys Workbench, Lotus Shark
Machine Learning and Robotics: Numpy, OpenCV, ROS, MuJoCo, CoppeliaSim