Aman Manish Chulawala

achulawa@andrew.cmu.edu | (412) 641-9293
LinkedIn | GitHub | Portfolio

Education

Carnegie Mellon University May 2024
Master of Science in Mechanical Engineering *Pittsburgh, PA*

- GPA: 4.0/4.0
- Coursework: Computer Vision, Robot Decision Making and Planning, Optimal and Robust Control, Machine Learning, Reinforcement Learning

University of Mumbai May 2022
Bachelor of Engineering in Mechanical Engineering *Mumbai, India*

- GPA: 9.81/10.0
- Coursework: Dynamics of Machines, Industrial Electronics, Linear Control Systems, Mechatronics

Work Experience

Robotic Systems Engineering Intern May 2023 – Aug 2023
Neocis *Miami, FL*

- Bench-marked joint performance for actuators used in high precision robots
- Ideated and manufactured dedicated testing stations, planned experiments and developed software architecture which allowed the operation of test rig as a standalone station

CAD and Product Design Intern Aug 2021 – Oct 2021
RoboSlog *New Delhi, India*

- Presented a design for locking mechanism to be used in an IoT based module, received favourable feedback from supervisor and prototyped mechanism for deployed product
- Implemented robust testing and validation protocols to ensure successful integration of software and hardware components in final product

Academic Projects

Robotic Metrology for Additive Manufactured Parts (CERLAB) Sept 2022 – Present

- Researching optimization of Coverage Path Planning problem for trajectory optimization of a 6-DOF manipulator used for quality control of additive manufactured parts
- Working on the model segmentation using voxel cloud connectivity segmentation algorithm to divide model into individual segmentation for scanning with MicroEpsilon laser scanner

Mobile Autonomous Robot for assistance on Cargo Ships Jan 2023 – May 2023

- Developed a mobile robot with a 5-DOF manipulator for cargo ships to assist in maintenance operations and safety inspections
- Spearheaded creation of the perception subsystem for robot and developed communication and control architecture for autonomous operation of entire system

Skills

Software: MATLAB, SolidWorks, ROS (Melodic and Noetic), Gazebo, ANSYS Mechanical Workbench, Altair HyperWorks, Autodesk Inventor, Microsoft Office

Programming: Python2, Python3, C++, Java, Julia, C, SQL

Other Skills: Optimal control architecture, Trajectory planning and optimization, Visual SLAM, Point cloud registration and processing, Planning for affordance based manipulation, Architecture design for mechatronic systems