Aatish Gupta

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EDUCATION

Carnegie Mellon University
Pittsburgh, PA
Expected Graduation: 2025
Master of Science in Mechanical Engineering
QPA: 3.84

Rowan University
Glassboro, NJ
Graduated: 2023
Bachelor of Science in Mechanical Engineering
GPA: 3.53

- Physics Minor
- Bantivoglio Honors Concentration

EXPERIENCE

CERLAB – Dr. Kenji Shimada
Master's Student Researcher
Carnegie Mellon University, Pittsburgh, PA
January 2024 – Present

- Conducting research in multi-agent semantic SLAM for industrial mapping and inspection.

Robotics & Physical Human-Machine Interactions Lab – Dr. Mitja Trkov
Soft Robotics Research Assistant
Rowan University, Glassboro, NJ
February 2022 – October 2023

- Developed novel pneumatic and cable-driven soft robotic actuators.
- Used ANSYS to model behavior of soft robotics actuators and refine their design.
- Developed novel polymer casting methods that served as a critical aspect of a published journal.

Stanford D. School
University Innovation Fellow
Glassboro, NJ
April 2021- Present

- Led workshops and training seminars on design thinking.
- Led a project to extend design thinking training to non-engineering and non-business majors through curricular changes.
- Guided other University Innovation Fellows with their projects as a UI guide.

Ellenby Technologies
Mechanical Engineering Intern
Woodbury Heights, NJ
June 2022 – August 2022

- Conducted R&D for two new retail cash management devices.
- Communicated with domestic and international partners for parts sourcing and quoting.
- Used machine shop tools to fabricate prototypes.
- Used SolidWorks plastics and statics simulations to determine the viability and manufacturability of injection molded parts.

Children's Defense Fund

Servant Leader Intern
Camden, NJ
June 2021-August 2021

- Served K-8 students and provided instruction in literacy and STEM to prevent summer learning loss and create opportunities.
- Facilitated discussion around equity and social action.

Aersys

Mechatronics Engineering Intern
New Brunswick, NJ
June 2021-August 2021

- Designed and developed novel parts, mechanisms, and robotic systems for use with autonomous drones and rovers.

Rutgers Lab for Machines, Manufacturing, and Mechatronics – Dr. Aaron Mazzeo

Student Researcher
Rutgers University, New Brunswick, NJ
June 2018 - August 2018

- Managed and participated in a team of three high school students to create a novel soft robotic assisted grip device for patients with disabilities.

Studio 231

Maker Space Technician
Glassboro, NJ
September 2021 – May 2022

- Designed and led workshops to teach Rowan University students skills including 3D printing, design thinking, and low-resolution prototyping.
- Acted as the lead developer in a small team to create the website linked above and to advocate for, develop, and implement a system to consolidate and track 3D print submissions.

LifeLens Technologies

Robotic Automation Engineering Intern
Ivyland, PA
May 2024-August 2024

- Designed parts to aid automation of manual tasks
- Designed and built proof-of-concept prototypes for new manufacturing methods

TECHNICAL SKILLS

Programming languages: C++, Python, MATLAB, JavaScript
Controls Coursework: Dynamic Systems and Controls, Modern Control Theory, Multivariable Linear Control (Robust Control), Advanced Control Systems Integration
Software: AutoCAD Inventor, SolidWorks, OnShape, Blender, ANSYS, MATLAB
Machining and Prototyping: 3D Printing**,** Polymer Casting Fabrication methods, laser cutting/engraving, machining (manual mill, lathe, drill press), designing for injection molding

COMPETITIONS

RoboSoft 2022 Terrestrial Race
Edinburgh, Scotland April 2022

- Managed and participated in a team of six fellow students to develop a terrestrial locomotive soft robot to compete virtually against international teams.

JOURNAL ARTICLES

Pagliocca, N., **Gupta**, A., Knospler, J., Singh, N. & Trkov, M. (2023) Modular Multi-Deformation Mode Soft Pneumatic Actuators, *Sensors and Actuators A: Physical*, https://doi.org/10.1016/j.sna.2024.115830