

# Aragya Goyal

Linkedin: [linkedin.com/in/aragya-goyal/](https://www.linkedin.com/in/aragya-goyal/)  
Github: [github.com/Aragya1642](https://github.com/Aragya1642)

Mobile: +1-610-615-7007  
Email: [agoyal1642@gmail.com](mailto:agoyal1642@gmail.com)

## EDUCATION

### University of Pittsburgh

*B.S. - Computer Engineering (Autonomous Systems Focus); GPA: 3.99*

Pittsburgh, PA

*August 2022 - April 2026*

## SKILLS

- **Languages:** Python, C++, ARM Assembly
- **Technologies:** Linux, ROS, Github, Solidworks, MATLAB, Microsoft Products, Arduino, Raspberry Pi, OpenCV
- **Manufacturing:** Milling, Soldering, Laser Cutting, General Shop Tools

## RELEVANT EXPERIENCE

- **Carnegie Mellon University - Robotics Institute (Biorobotics Lab)** Pittsburgh, PA  
*Undergraduate Researcher (Part-Time)* April 2023 - Present
  - **Project Course - Find Movie Similarity from Plot Summaries:** Created project based course using Unsupervised learning and natural language processing.
  - **Tutorial - Introduction to Reinforcement Learning:** Created tutorial for Q-learning RL algorithm and concepts.
  - **Impact:** Course has been taken by 250+ students so far with 4.65 average rating.
- **Society of Astronautics and Rocketry** Pittsburgh, PA  
*Chief Engineer (Student Led Organization)* August 2022 - Present
  - **Project Course - Find Movie Similarity from Plot Summaries:** Created project based course using Unsupervised learning and natural language processing.
  - **Tutorial - Introduction to Reinforcement Learning:** Created tutorial for Q-learning RL algorithm and concepts.
- **Formula SAE - Panther Racing** Pittsburgh, PA  
*R&D Engineer (Student Led Organization)* August 2022 - March 2024
  - **Project Course - Find Movie Similarity from Plot Summaries:** Created project based course using Unsupervised learning and natural language processing.
  - **Tutorial - Introduction to Reinforcement Learning:** Created tutorial for Q-learning RL algorithm and concepts.
- **UPMC - Laboratory of Ocular Biomechanics** Pittsburgh, PA  
*Undergraduate Researcher (Volunteer)* January 2023 - May 2023
  - **Project Course - Find Movie Similarity from Plot Summaries:** Created project based course using Unsupervised learning and natural language processing.
  - **Tutorial - Introduction to Reinforcement Learning:** Created tutorial for Q-learning RL algorithm and concepts.
- **FIRST Robotics** Exton, PA  
*Undergraduate Researcher (Volunteer)* January 2023 - May 2023
  - **Project Course - Find Movie Similarity from Plot Summaries:** Created project based course using Unsupervised learning and natural language processing.
  - **Tutorial - Introduction to Reinforcement Learning:** Created tutorial for Q-learning RL algorithm and concepts.
- **VEX Robotics** Royersford, PA  
*Undergraduate Researcher (Volunteer)* January 2023 - May 2023
  - **Project Course - Find Movie Similarity from Plot Summaries:** Created project based course using Unsupervised learning and natural language processing.
  - **Tutorial - Introduction to Reinforcement Learning:** Created tutorial for Q-learning RL algorithm and concepts.

## TECHNICAL PROJECTS

- **STM-32 Elevator Simulator (ARM Assembly, PCB Design, Project Integration):** Designed and Implemented software architecture in ARM Assembly to operate a physical elevator simulator PCB. (Link: [https://github.com/Aragya1642/STM32.Elevator\\_Project/tree/master](https://github.com/Aragya1642/STM32.Elevator_Project/tree/master))
- **Custom Cane (Human Centered Design, Solidworks, Presentation):** Designed and manufactured a Walker-Cane Fusion to make bathrooms more accessible for wheelchair users. The project won first place at the Senior Design Expo within its category. (Link: <https://tinyurl.com/CustomCane>)
- **Silicon Soft-Actuated Prosthetic Hand (Research, Solidworks):** Designed and Manufactured prototype prosthetic hand with silicone soft actuators and tested with human participants for AP Capstone research project. (Link: <https://tinyurl.com/myprosthetic>)

## HONORS AND AWARDS

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- Awarded title of Intel Software Innovator - May, 2019
- Second Runner's Up at TCS EngiNx Engineering Project Innovation Content - September, 2018
- Runner's Up at Facebook Developers Circle Hackathon - August, 2017

