

# Aragya Goyal

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## EDUCATION

### University of Pittsburgh

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

Pittsburgh, PA

*August 2022 - April 2026*

## SKILLS

- **Languages:** Python, PHP, C++, JavaScript, SQL, Bash, JAVA
- **Frameworks:** Scikit, NLTK, SpaCy, TensorFlow, Keras, Django, Flask, NodeJS, LAMP
- **Tools:** GIT
- **Platforms:** Linux, Web, Windows, Arduino, Raspberry, AWS, GCP, Alibaba Cloud, IBM Cloud
- **Soft Skills:** Leadership, Event Management, Writing, Public Speaking, Time Management

## RELEVANT EXPERIENCE

- **Carnegie Mellon University - Robotics Institute** Pittsburgh, PA  
*Undergraduate Researcher (Part-time, Summer Internship)* April 2023 - Present
  - **Discussion Forum Upgrades:** Refactor forum for performance to handle large databases.
  - **REST API for Discussion Forum:** Symphony & Twig based Forum parts converted to API-first interface.
  - **Ratchet PHP WebSocket:** Implemented a WebSocket for low-latency real time exchange of posts and thread updates.
- **Society of Astronautics and Rocketry** Remote  
*Chief Engineer (Student Club)* 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.
  - **Impact:** Course has been taken by 250+ students so far with 4.65 average rating.

## PROJECTS

- **Vison - multimedia search engine (NLP, Search Engine, Web Crawlers, Multimedia Processing):** (Work in progress) Research oriented, open source, search engine for bringing reverse multimedia search to small & mid scale enterprises. Tech: Python, NodeJS, Intel OpenVino Toolkit, Selenium, TensorFlow (October '18)
- **Reinforcement Learning based Traffic Control System (Reinforcement Learning, Computer Vision):** AI model to resolve city traffic around 50% faster. Tech: Python, Alibaba Cloud, Raspberry Pi, Arduino, SUMO & OpenCV. (August '18)
- **Panorama from Satellite Imagery using Distributed Computing (Distributed Computing, Image Processing):** Images clicked using drones, provided by ISRO were stitched together using distributed public compute nodes, effectively bringing down processing time exponentially. Tech: PHP, C++, Java, Python (March '18)
- **Drag-n-drop machine learning learning environment (Web Development, Machine Learning):** Scratch like tool for implementing machine learning pipelines along with built in tutorial for each concept. Tech: Python, JavaScript (September '18)
- **Search Engine and Social Network(Web Development, Web Crawler, Search):** Created from scratch a social network and a search engine based on the idea of integrating Facebook and Google. The launched website was among top 1000 websites in India during 2012-2013. Tech: PHP, MySQL, HTML, CSS, WebSockets, JavaScript, RSS, XML ( May '12)

## PUBLICATIONS

- **Book: Deep Learning on Web (Web Development, Deep Learning):** Work in Progress book to be published by Packt Publishing in late 2019. Tech: Django, Python, AWS, GCP, Azure (November '18)
- **Book: Deep Learning on Mobile Devices (Flutter App Development, Deep Learning):** Work in Progress book to be published by Packt Publishing in late 2019. Tech: Flutter, Android, Firebase, TensorFlow, Python, Dart (December '18)

## HONORS AND AWARDS

- 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

## VOLUNTEER EXPERIENCE

- **Community Lead at Developer Student Clubs NSEC** Kolkata, India  
*Conducted online and offline technical & soft-skills training impacting over 3000 students.* Jan 2019 - Present
- **Event Organizer at Google Developers Group Kolkata** Kolkata, India  
*Organized events, conducted workshops and delivered workshops reaching over 7000 developers.* Jan 2018 - Present