

# Aditi Narasimhan

408-707-4063 | [aditin@andrew.cmu.edu](mailto:aditin@andrew.cmu.edu) | [linkedin.com/in/aditi-narasimhan-8b939a1a9](https://www.linkedin.com/in/aditi-narasimhan-8b939a1a9) | <https://aditinnara.github.io/>

## EDUCATION

### Carnegie Mellon University

Aug. 2020 – May 2025

*M.S. in Electrical and Computer Engineering, Conc. in Software Engineering*

*GPA: 4.0/4.0*

*B.S. in Electrical and Computer Engineering, Double Major in Philosophy*

*GPA: 3.8/4.0*

## COURSEWORK

**Courses:** Computer Systems, Machine Learning, Principles of Imperative Computation, Web Application Development, Design of Digital Systems, Computer Networks, Distributed Systems, Offensive Security, Datacenter Computing

**Awards:** Dean's List (6x), University Honors

## EXPERIENCE

### Software Engineering Intern

Summer 2022, 2023, 2024

*Wells Fargo*

*Fremont, CA*

- Developed an NLP-driven chatbot using Keras and spaCy in 10 weeks, enabling developers to efficiently select the correct APIs based on their needs.
- Implemented and tested card PIN authentication flows in a card reader application using React and SpringBoot, achieving 100% BDD test coverage on all new features.
- Led a cross-functional team of 3 interns to build a JIRA ticket information extractor using Keras, reducing manual ticket processing time for backend support teams.
- Redesigned and deployed the bank teller application UI with HTML, CSS, JavaScript, and React, streamlining the teller transaction process.

### Software Engineer

Aug. 2023 – June 2024

*IRIS Rover*

*Pittsburgh, PA*

- Developed lunar terrain visualization software using OpenCV that employs planar homography to project front-view terrain images onto a top-view simulator, enhancing navigation accuracy in challenging lunar terrain.
- Enhanced localization software by integrating a CNN to detect and automatically flag 6 types of dangerous obstacles.
- Designed an interactive ground software UI with Matplotlib, enabling operators to analyze obstacles from multiple angles for better decision-making and trained ground operators in software use.

### Co-founder of the HOPEful Engineering Collective

Jan. 2022 – Present

*Carnegie Mellon University*

*Pittsburgh, PA*

- Co-founded a tech ethics organization at CMU with Dr. Michael Skirpan; designed the website, led outreach, structured organizational roles, moderated panels and debate events for over 100 students and faculty.
- Created a video essay to define our mission with over 50 student and faculty interviews.
- Redesigned the ethics lecture for the ECE senior capstone course and co-instructed the lecture for 150+ students.
- Served as the head TA for the course Ethics and Policy Issues in Computing, taught weekly lectures to 30 students.

## PROJECTS

### Postpartum Care Assistant | *GPT-4, Python, DynamoDB*

- Worked on a team to create a medical device in collaboration with Honda Labs to help postpartum patients take control of their mental/physical health.
- Co-developed an aggregate anomaly detection model coupled with a finetuned LLM medical assistant. Integrated with sensors, provider and user-facing iOS applications to create a fully functional prototype.

### CTF Problem Development and Security Research | *Python, C++, pwntools*

- Developed capture the flag (CTF) cryptography problems for the platform picoCTF, which were deployed in a competition for 60+ students. Awarded 'Best Problem' by community vote, achieving a 100% upvote rate from participants.
- Identified, replicated, and reported a XSS and CSRF vulnerability in the IT platform iTop, earning a CVE.

### SceneScribe Visual Aid | *Python, Flask, PyTesseract, RaspberryPi, XCode*

- Collaborated on a senior project to develop wearable glasses for visually impaired users, utilizing OpenCV and PyTesseract to create an OCR model to capture lecture slide text with an accuracy of 98.2%.
- Created an iOS and Flask app for data transmission with a Raspberry Pi, integrated a graph description LSTM for a 96% accuracy. Integrated haptic feedback features and conducted user testing.

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, JavaScript, HTML/CSS, R

**Frameworks:** React, Node.js, Flask, Django

**Developer Tools:** Git, Docker, Google Cloud Platform, VS Code, PyCharm

**Libraries:** pandas, NumPy, Matplotlib, OpenCV, PyTesseract, Keras, spaCy, pwntools