Aditi Narasimhan

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Education

Carnegie Mellon University — Pittsburgh, PA
Master of Science in Electrical and Computer Engineering, Conc. in Software Engineering — *Aug. 2024 – May 2025*

Carnegie Mellon University — Pittsburgh, PA
Bachelor of Science in Electrical and Computer Engineering, Double Major in Philosophy — *Aug. 2020 – May 2024*

- GPA: 3.82 (University Honors, Dean's List)
- **Relevant Coursework:** Computer Systems, Machine Learning, Principles of Imperative Computation, Web Application Development, Design of Digital Systems, Computer Networks, Distributed Systems, Offensive Security

Experience

Software Engineering Intern — Summer 2022, 2023, 2024
Wells Fargo — *Fremont, CA*

- Developed an NLP-driven chatbot using Keras and spaCy to help customers choose the appropriate APIs
- Added functionality to a cardpin reader application using React and SpringBoot, covered flows with BDD tests
- Led team of interns to create an automated JIRA ticket information extractor using Keras
- Used HTML, CSS, JavaScript to redesign the UI of bank teller application flows for a streamlined experience

Moon Rover Terrain Visualization Engineer — Aug. 2023 – June 2024
IRIS Rover — *Pittsburgh, PA*

- Created and deployed terrain visualization software to help operators safely maneuver the rover
- Set up rover cameras and calculated intrinsic/extrinsic matrices for homographies
- Implemented planar homography using OpenCV to project a front-view terrain onto a top-view simulator
- Reworked an existing localization software to identify dangerous craters using a CNN
- Designed a ground software UI with Matplotlib for operators to view obstacles from different angles
- Wrote a 10 page report, presented to the organization and a space robotics course at CMU, and trained operators

Undergraduate Research and Teaching Assistant — Jan. 2022 – Present
Carnegie Mellon University — *Pittsburgh, PA*

- Implemented a sentiment extraction model using NLTK to identify common words in survey responses
- Created published visualizations of common sentence structures and parts-of-speech using R
- Developed Python scripts to automate attendance verification, integrated automation with QR scanner app
- Designed website, conducted outreach, planned organizational structure, and hosted events for a new campus organization to promote ethics in technology

Projects

Poetica | *Python, AJAX, JavaScript, HTML/CSS, Django*

- Created a website using AJAX techniques and the Django framework which allows users to find poetry based on their mood, upload their own poems, and interact with other users on the site
- Trained an RNN to match a poem to a list of emotions, which generates an image displayed with each poem
- Deployed website to AWS for an end-of-year showcase and presentation
- Integrated the website with Pinterest, allowing users to save their favorite poems and images to Pinterest boards

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

- Worked on a team to create wearable glasses for visually-impaired users to review lecture slides
- Used OpenCV to preprocess and create training data for a CNN-LSTM
- Implemented an OCR model with PyTesseract to capture text on lecture slides
- Co-developed a graph description LSTM to describe figures present on lecture slides
- Created an iOS app with XCode and developed a Flask server to send and receive data from a RaspberryPi
- Tested product with visually-impaired students and integrated haptic touch features into the app

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, Visual Studio, PyCharm, IntelliJ
Libraries: pandas, NumPy, Matplotlib, OpenCV, PyTesseract, Keras, spaCy