


Gati Aher

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Education

Olin College of Engineering – Needham, MA

Dec 2023

Bachelor of Science in Engineering: Computing

GPA: 4.0

- Recipient of 4-year, 50% Franklin W. Olin College Merit Scholarship
- Massachusetts Space Grant Undergraduate Research Award – Fall 2021
- **Relevant Courses:** Data Structures and Algorithms; Software Systems; Discrete Mathematics
Quantitative Engineering Analysis; Neurotechnology: Brains and Machines
- **Skills:** Python, Java, Bash, MATLAB, C, React.js, Node.js, D3.js, HTML/CSS, SQL, LaTeX, AWS, Docker, ROS, OpenCV, Statistics, Machine Learning, Deep Learning

Experience

Researcher ML & Data Science Lead, Olin Satellite + Spectrum Technology & Policy)

Fall 2021 – Present

- Apply causal inference statistics, time-series analysis, and modeling to factors of 5G spectrum value
- Automate process of document NER extraction to create FCC license database

Researcher Data Science Lead, Olin Microbiology and Bioinformatics Research Lab

Spring 2021 – Present

- Apply time-series network analysis on microbe communities to infer interactions and behavior modes
- Use statistics and effective data visualizations to gain insights into community composition
- Perform Fourier analysis to identify and measure periodic patterns in bacteria S-layer images

Intern R&D and ML Teams, Indico Data Solutions

Summer 2021

- Implemented React tool allow customers to draw and correct on-document invoice text groupings
- Used rapid prototyping and user-testing feedback to inform design
- Programmed and trained neural network object-detection system to classify handwriting and checkboxes using Faster R-CNN algorithm and Detectron-v2 framework
- Applied techniques for alternate pre-training, multi-label formulation, and small object detection

Intern NLP and ML-DevOps Teams, The MITRE Corporation

Fall 2020

- Revived and adapted academic code to generate paraphrases using bilingual pivoting technique
- Run time experiments to determine Hadoop configuration for resource-intensive computation
- Applied logistic regression with feature engineering for classification on imbalanced dataset
- Built Docker and gRPC automated pipeline for evaluating vulnerabilities in AI models

Summer 2019

Teaching Assistant Software Design in Python, Olin College of Engineering

Fall 2020

- Taught Object-Oriented Programming System, Design Patterns, debugging, and programming concepts during weekly office hours. Graded projects and assignments.

Intern Backend Team, Cumulus Digital Systems

Summer 2020

- Built AWS SNS, Lambda, and DynamoDB webhooks system to give clients real-time data updates
- Implemented secure REST API + Swagger UI microservice to let clients interface with the platform
- Developed system of API response and request validation and automated documentation generation

Projects

Full-Stack Web Application for Local Pool Management (Website: <https://www.lagaannfl.com>)

Fall 2020

- Built secure user and admin management for football pool picks, used by 40+ users
- Designed and implemented scoring engine to validate user pool picks and compute score, and React UI to handle team selections and leaderboard displays
- Built with React, TypeScript, Auth0, Material-UI, Node.js, SQLite, PM2, Nginx. Deployed on AWS EC2 / DigitalOcean Droplet