Rajat Mehndiratta

GITHUB rajatscode **LINKEDIN** /in/rajatsprofile **WEBSITE** rajats.site **E-MAIL** r@jats.email **LATEST RESUME** rajatsresu.me

Skills

Languages: Python, Java, C, JavaScript, MATLAB, SystemVerilog
Libraries: Flask, Guava, React Native
Tools: bash, vim, git, hg, CI/CD, Agile workflow, LaTeX

Experience

Software Engineer July 2021 - present
TBD

TBD

Software Engineer June 2019 - July 2021
Google > Unified Fulfillment Optimization > Fleet Transformation

Enhanced Java backend for mixed-integer programming solver web microservice to optimally plan Google infrastructure deployments (e.g., which machines to add/upgrade to meet compute demand).
+ Launched recurring automated jobs to detect and re-plan no-longer-viable solutions, increasing granularity and touchlessness while reducing lead time variance.
+ Designed and delivered API to plan with counterfactuals, increasing on-time fulfillment and reducing manual intervention rate for planning changes and execution problems.

Software Development Engineer Intern May - August 2018
Amazon > Supply Chain Optimization Technologies > Topline Forecasting

Investigated and implemented serverless solutions to reduce forecasting compute costs by 10-100x.
+ Designed workflow schema and implemented Python-based orchestrator to operate forecasting flows on AWS serverless platform, for use by economists and engineers.
+ Generated 150+ pages of documentation covering several viable serverless architecture options.

Software Development Engineer Intern May - August 2017
Amazon > Worldwide Operations > Robotics

Explored and validated deep reinforcement learning approaches for visual navigation in a sidewalk delivery robot (Amazon Scout).
+ Drove effort to generate training data from realistic commercial virtual 3D environments.
+ Built simulation and testing environment for Nav A3C visual navigation agent.
+ Contributed to TensorFlow/sonnet-based implementation and devised performance metrics.

Education

Carnegie Mellon University May 2019
Bachelor of Science, Electrical and Computer Engineering

Coursework: Advanced Mobile Robot Development (16-865), Advanced Digital Signal Processing (18-792), Introduction to Machine Learning (10-601), Rapid Protoyping of Computer Systems (18-540), Introduction to Computer Architecture (18-447), Natural Language Processing (11-411), Neural Technology: Sensing & Stimulation (18-412), Logic Design and Verification (18-341)

Involvements: hackathons (competitor, mentor, organizer, and sponsor), Mock Trial (Captain), SDC Buggy (carbon-fiber gravity racing; Mechanic), End The Rain (umbrella dispensers; Co-Founder, Tech Lead)

Projects

Nemosi (18-540 Class Capstone) January - May 2019
Chief Architect, Wireless Networking Lead

Drove architecture and wireless networking design for prototype system to help Alzheimer's patients.

SCOT-T Lunar Rover (16-865 / CMU+Astrobotic Lunar X Prize Project) January - May 2016
Engineer on Communications, Hardware, and UI Teams

Worked on development and testing of UDP-based communications for novel 4.5kg Cube Rover standard.

FifthSense (PennApps Fall 2015 Grand Prize) September 6-8, 2015
Hackathon Competitor

Built full-duplex handheld device to allow blind users to access smartphones in mobile contexts.