

Rajat Mehndiratta

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

Skills	Languages: Python, Java, JavaScript, MATLAB, SystemVerilog Libraries: Flask, Guava, React Native Tools: git, hg, vim, CI/CD, Agile workflow, L ^A T _E X	
Experience	Software Engineer Fleet Transformation (Unified Fulfillment Optimization), Google Enhancing Java backend for mixed-integer programming solver web microservice to optimally plan Google infrastructure deployments (e.g., which machines to buy/upgrade to meet compute demand). + Implemented and launched recurring automated jobs to detect and re-plan no-longer-viable solutions, making planning more touchless, increasing planning granularity and reducing variance in lead time. + Designed and delivered look-ahead API to plan with counterfactuals, increasing on-time fulfillment and reducing manual intervention rate to mitigate costs of planning changes and execution problems. + Modernizing team infrastructure to increase release cadence and reduce on-call burden. Software Development Engineer Intern Topline Forecasting (Supply Chain Optimization Technologies), Amazon.com Investigated and implemented serverless solutions to reduce forecasting compute costs by 10-100x. + Identified engineers' and economists' large-scale workflow requirements to develop definition schema. + Implemented Python-based workflow orchestrator to operate forecasting workflow on multiple considered architectures using AWS Lambda, Batch, Fargate, Step Functions, SQS, S3, DynamoDB, and Aurora. + Demonstrated several working architectures and outlined 3 approaches for team to consider, generating 150+ pages of documentation. Software Development Engineer Intern Robotics (Worldwide Operations), Amazon.com Explored and validated deep reinforcement learning approaches for visual navigation in a sidewalk delivery robot (Amazon Scout). + Drove data-gathering effort focusing on generating training data from virtual 3D environments. + Built simulation environments for Nav A3C agent in 2 and 3 dimensions. + Contributed to TensorFlow/sonnet-based implementation and devised performance metrics.	June 2019 - present May - August 2018 May - August 2017
Education	Carnegie Mellon University 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 Prototyping 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), Entrepreneurship for Engineers (70-420), Business Law (70-364), Organizational Behavior (70-311) 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)	May 2019
Projects	Nemosi (18-540 Class Capstone) 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) 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) Hackathon Competitor Built full-duplex handheld device to allow blind users to access smartphones in mobile contexts.	January - May 2019 January - May 2016 September 6-8, 2015