Sarah Pethani

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516-368-5328

EDUCATION

Carnegie Mellon University <div align="right">Pittsburgh, PA</div>

Bachelor of Science in Computer Science; Minor in Game Design; GPA: 3.83 <div align="right">*Sep 2019 – May 2023*</div>

- **Coursework:** Data Structures and Algorithms, Algorithm Design and Analysis, Parallel Computer Architecture and Programming, Computer Vision, Computer Graphics, Computational Photography, Game Engines, Theoretical Computer Science, Computer Systems, Imperative Programming, Functional Programming, Probability in Computing, Discrete Math, Linear Algebra, 3D Calculus

EXPERIENCE

Stripe <div align="right">New York, NY</div>

Software Engineer Intern <div align="right">*May 2022 - Jul 2022*</div>

- Mapped out implementation of bank partner's integration and identified possible areas for latency improvements in the Financial Connections authorization flow where users connect their bank accounts.
- Parallelized calls to API using a gRPC server in **Ruby**. Decreased p50 and p99 latencies of pulling bank account balances for a user by 25%. Latency no longer has dramatic spikes when number of bank accounts spikes for a user.
- Reduced number of database reads, decreasing p50 latency of refreshing all of an account's transactions by 50%. Also decreased p99 latency by 55%.

Snap Inc. <div align="right">New York, NY</div>

Software Engineer Intern <div align="right">*Jan 2022 - Apr 2022*</div>

- Updated ML model used for visual tagging of Snapchat Memories, allowing for more precise visual search results as well as curated stories for users. Updated the way thresholds are fetched to come from internal config files instead of endpoints. Programmed for iOS app using **Objective-C.**
- Improved iOS code readability and dependency usage for Snapchat Memories.

Amazon Web Services <div align="right">Seattle, WA</div>

Software Developer Engineer Intern <div align="right">*May 2021 - Aug 2021*</div>

- Worked on computer vision services as part of the AWS Rekognition team. Used IoT and AI/ML-related AWS services such as **Greengrass**, **SageMaker**, and **SiteWise**, coding in **Python**. Performed inferences on images to detect anomalies in products.
- Created API service using **Java** to validate license credentials and return encryption keys for the purpose of encrypting ML models. Used AWS services such as **API Gateway**, **Lambda**, and **DynamoDB**, and created AWS stacks using **CloudFormation**.

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Research Assistant <div align="right">*Sep 2020 - May 2021*</div>

- Designed and implemented a teacher front-end web dashboard using **HTML**, **CSS**, and **Javascript (Vue.js)** which displayed aggregate dynamic student information such as problems completed, idleness, student struggle, and problem mastery. Used JSON data from an intelligent math tutoring system.
- Built asynchronous detectors for full-stack web application using web workers and message passing in **Javascript**. Implemented algorithms which detected idleness, struggle, and system misuse as part of intelligent tutoring software.

Carnegie Mellon University <div align="right">Pittsburgh, PA</div>

Teaching Assistant — 15-213 Introduction to Computer Systems <div align="right">*Jan 2021 - May 2021*</div>

- Taught introductory computer systems to both undergraduate and graduate students in weekly recitations. Topics include **C** programming, assembly, caches, dynamic allocation, processes, signal handling, and threads.
- Guided students in debugging programming assignments during weekly office hours. Served as a personal contact point for 15 students to give immediate help regarding course content, and gave feedback on code style.

TECHNICAL SKILLS

Programming	C, C++, Python, Java, Objective-C, Ruby, Standard ML, HTML/CSS, Javascript
Libraries/Frameworks	NumPy, OpenCV, Vue.js, React.js, SASS, CUDA
Developer Tools	Git, AWS