Claire Hsu

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EDUCATION

Massachusetts Institute of Technology — **Cambridge, MA**

Master of Engineering in Computer Science, Concentration in Computer Systems — May 2021

Bachelor of Science in Computer Science and Engineering — May 2020

Relevant Courses: Elements of Software Construction, Operating System Engineering, Design and Analysis of Algorithms, Computer Systems Security — GPA: 5.0/5.0

WORK EXPERIENCE

Stripe — **New York City, NY**

Software Engineer — August 2021 - present

- Designed and implemented developer APIs for the Financial Connections product to enable merchant access to financial information, including the Account Ownership, Transactions, and Relink API.
- Collaborated with and integrated feedback on API shape and performance from large enterprise users.
- Created and optimized asynchronous backend systems using Temporal to improve system scalability.
- Engineered efficient data modeling in MongoDB to remove redundant database operations in critical financial data refresh flows.
- Designed, trained and implemented ML modeling for a financial transaction matching algorithm.

Amplify, Inc. — **Cambridge, MA**

Co-founder/Chief Technology Officer — March - August 2020

- Co-founded nonprofit organization that connects local organizations to everyday people in order to mobilize communities against COVID-19.
- Designed and developed web platform using Google Firebase, Cloud Maps API, Twilio, Python, and React.

Google — **New York City, NY**

Software Engineering Intern — June – September 2020

- Designed and implemented logging infrastructure for server binaries for Cloud Service Directory team.
- Developed data processing pipeline in C++ to aggregate and anonymize logs for long-term data storage.
- Created visualizations for processed data using SQL queries to analyze user patterns and activity.

Software Engineering Intern — May - August 2019

- Built and deployed server to simulate vendor interactions for Google Photos Printing team.
- Implemented RPC service in Java to interface with existing infrastructure and manage simulated orders.
- Designed asynchronous task flow to simulate timing of order notifications and updates.

MIT Computer Science and Artificial Intelligence Laboratory — **Cambridge, MA**

Graduate Researcher – Commit Group — September 2019 – June 2020

- Implemented a compiler for a graph-focused DSL that integrates into various backend architectures.
- Developed a compiler backend for a multicore architecture, including several hardware-specific compiler passes.
- Benchmarked compiler using various graph traversal algorithms, demonstrating 8x speedup over baseline CPU implementations.

Undergraduate Researcher – Commit Group — September 2019 – June 2020

- Optimized and benchmarked sparse linear algebra operations in largescale applications.
- Evaluated existing methods and wrote new kernel implementations in C/C++, utilizing cache optimizations, data prefetching, and parallelization.

SKILLS AND ACTIVITIES

Programming: Ruby, Java, Python, C/C++, SQL (Presto), MongoDB, HTML/CSS, TypeScript, React, Firebase.
Student Leadership: Vice President, MIT McCormick Hall. Director of External Operations, MIT Model UN.