William Ma

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LinkedIn
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Education

Cornell University

Jan 2022 – May 2022

- Masters of Engineering, Computer Science
- GPA 4.3 / 4.3

Cornell University

Aug 2018 – Dec 2021

- Bachelors of Science, Computer Science, Summa Cum Laude
- Minor in Mathematics
- GPA 4.2 / 4.3

Experience

Senior Software Engineer @ Ramp

Dec 2023 – Present

- Delivered revamp of Bill Pay tables, including complex filters and sorts, and bulk actions
- Optimized Bill Pay performance end-to-end, from endpoint serdes and worker queue latencies, to SQL query optimization and Python garbage collection
- *... and more to come*

Software Engineer @ Juniper Networks

Nov 2022 – Dec 2023

- Developed tool to generate and measure throughput of line-rate traffic on device
- Fixed datapath issues related to e.g. default MTU size, firmware load time
- Created tools to manage internal processes for team

AR & NLP Research Intern @ Bosch

Jun 2022 – Oct 2022

- Defined user study to evaluate novel interaction in augmented reality
- Trained and deployed n-gram language models

Systems Researcher @ Cornell

Sep 2021 – May 2022

- Parallelized model checker in C
- Developed technique for efficient verification of programs used in Operating Systems course

Open-Source Contributor @ Homebrew

May 2020 – Aug 2020

- Implemented web scraper to add license information to 2500 homebrew-core packages
- Addressed long-standing user confusion by merging 8 similar commands

Projects

OceanScene / Real-Time Rendering

Spring 2022

- Built multi-stage deferred rendering pipeline in OpenGL using C++
- Implemented Tessendorf ocean simulation based on inverse FFT

Sharm / Systems Research Project

Fall 2021

- Implemented, profiled, and benchmarked interpreter and source-to-source compiler in Swift

TriBlank / NLP Research Project

Spring 2021

- Experimented on novel transformer-based model for relation extraction

Xi / Compiler

Spring 2020

- Parsed context-free grammar
- Implemented dataflow analysis and optimizations, including register allocation
- Developed test framework with unit, performance, and integration tests

Cello Mute / iOS App

2016 – 2018

- Independently developed iOS app for musicians
- 39K downloads

Skills

- Python, PyTorch, Transformers, Swift, iOS App Development, Java, C++

Coursework

- Compilers, Computer Graphics, Computer Vision, Embedded Systems, Formal Verification, Natural Language Processing, Operating Systems, Quantum Computing, Software Defined Networking
- Differential Equations, Linear Algebra, Number Theory