

Andrew Jemin Choi

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Experience

Algorand

SOFTWARE ENGINEER (🌐 ALGOCHOI)

Boston, MA

Jun 2021 - Present

- Worked on open-sourced consensus protocols, compilers, tools, and infrastructure in Go for a \$10B market cap blockchain startup (🌐 go-algorand), founded by Turing Award cryptographer Silvio Micali
- Designed and implemented parts of the AVM to allow safer & better programmability and interoperability for smart contracts
- Developed features, integrated Cucumber tests, and maintained infrastructure in CircleCI for the Algorand Python/JS SDK
- Introduced new AVM 1.1+ features (recursive inner contract calls) for the Algorand database indexer and Chrome Web debugger

University of Toronto

RESEARCH STUDENT, BLOCKCHAIN LAB

Toronto, ON

Sep 2019 - Dec 2021

- Researched novel methods to improve authenticated storage performance and test transaction execution throughput for a new multi-layered Merkle-Patricia structure in EVM-compatible systems (*to appear in ICBC 2022*)
- Developed performance benchmarks for Ethereum clients to evaluate a run-time smart contract validation tool (PLDI 2020)

University of Toronto

TEACHING ASSISTANT

Toronto, ON

Sep 2016 - May 2021

- Developed and wrote automated testers for graduate compilers assignments in C++, ANTLR, and LLVM (CSC488 - Compilers)
- Managed groups of 50+ students to build large software projects in C++/Java, held weekly code reviews, and taught students about various software development tools such as git, gdb, unit testing, and profiling (ECE297, CSC207 - Software Design)
- Received “Outstanding” TA ratings from course surveys, with an average rating of 6.87/7; TA'ed 8 Computer Engineering courses

Google

SOFTWARE ENGINEERING INTERN

Remote (Sunnyvale, CA)

Jun - Sep 2020

- Worked on a Software Defined Networking (SDN) project to develop an internal OpenConfig service in Go to aggregate and monitor vendor-neutral routing data
- Created a client that asynchronously streams events from the service using gNMI/gRPC APIs to log abnormal network activity

Amazon Web Services (AWS)

SOFTWARE DEVELOPMENT ENGINEER INTERN

Seattle, WA

May-Aug 2018, 2019

- Worked on the DynamoDB team to develop a Java client library for RESTful APIs to monitor and replace stale/faulty EC2 hosts for table indexing requests (Summer 2019)
- Worked on the AWS Internet of Things (IoT) team to create Python tools to streamline the on-boarding process for devices, reducing user wait times by 60% (Summer 2018)

Education

University of Toronto

MASTER (M.Sc.) IN COMPUTER SCIENCE

Dec 2021

BACHELOR (B.A.Sc.) IN COMPUTER ENGINEERING WITH HONOURS

May 2019

Projects

MLH Hackathons [devpost: ajchoi]

PYTHON, FLASK, SOLIDITY, REACT NATIVE, REDIS, CASSANDRA, FIRESTORE, GCP

- Received \$1000+ in awards as a competitor at collegiate hackathons (UofT, Dartmouth, CU Boulder, Ryerson), building projects addressing social issues ranging from tackling social anxiety to minimizing food waste in local communities
- Mentored students in ideating and implementing technical solutions for school/community hackathons