

# Andrew Jemin Choi

🇨🇦 Canadian & USA Dual Citizen 🏠 Boston, MA

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## Experience

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### Software Engineer

#### Tulip

Jan 2024 - Present

- Working at a Series C startup to create a low-code app builder and improve programmability for front-line manufacturing workers using **Typescript, React, MongoDB, and Go**
- Developed version control features, helped architect backend models, and designed RESTful endpoints to efficiently retrieve diffs across production apps
- Led initiatives to improve code quality and decrease on-call load by improving existing test frameworks and performance tooling (**Cypress, Docker, Jest, K6, Grafana**)

#### Algorand (📄 go-algorand)

Jun 2021 - Nov 2023

- Worked on open-sourced consensus protocols, compilers, tools, and infrastructure for a Series B \$1Bn+ market cap blockchain, founded by Turing Award MIT cryptographer Silvio Micali
- Worked on the AVm (smart contract assembler) and PyTeal (high level contract language) to enable safer and better programmability for Web3 apps (**Go, Python**)
- Reduced build and integration testing times by **60%** by optimizing test code and infrastructure across multiple repos, which led to CI savings and faster test cycles (**Cucumber, Docker, CircleCI, Github Actions**)
- Received prizes at internal hackathons for creating low-code smart contract editors and one-click deployment solutions
- Addressed public Github issues and presented live demos to devs in the ecosystem (**featured on the Proof of State Show!**)

### CS Research

#### University of Toronto, Software Engineering & Blockchain Lab

Sep 2019 - Dec 2021

- Received the **IEEE ICBC '22 Distinguished Paper Award** for improving authenticated storage performance and benchmarking transaction execution for a new multi-layered Merkle-Patricia structure in EVM-based systems (*Master Thesis*)
- Developed performance benchmarks for Ethereum clients to evaluate Solythesis, a novel run-time smart contract validation tool (**AWS, Rust, Python, Solidity**) (*ACM PLDI '20*)
- Competed and won \$1000+ in awards at MLH hackathons including UofT, Dartmouth, CU Boulder (*devpost.com/ajchoi*)

### Software Engineering Intern

#### Google, Amazon Web Services (AWS)

Summers 2018, 2019, 2020

- Worked on Global Networking (**Go, gRPC**), DynamoDB (**Java**), and IoT Core (**Python**)

### Teaching | Adjunct Faculty

#### Wentworth Inst. of Tech, Boston University, University of Toronto

Sep 2016 - Sep 2024

- **WIT COMP1050** - Computer Science II: Developed and delivered lectures, assignments and autograders using Github Classrooms for topics in Java (Object-Oriented Programming, data structures, GUIs, software engineering)
- **BU CS526** - DS & Algos: Taught data structures, complexity analysis and how to implement algorithms in Java
- **UofT CSC207, ECE244, ECE297** - Software Design: Managed groups of 50+ students to build large software projects in C++/Java, taught software architecture, design, and development tools (git, gdb, gprof, perf)
- Received “**Outstanding**” ratings from UofT course surveys (average: 6.87/7) and BU course surveys (4.9/5)

## Education

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### University of Toronto

#### Master (MSc) in Computer Science

Dec 2021

Advisor: *Fan Long*

#### Bachelor (BASC) in Computer Engineering with Honours

May 2019