Education

The University of Texas at Dallas, 2022/08 - Present — Richardson, Texas

Master of Science in Computer Science

Relevant Courses

- Advanced Computer Networks(currently enrolled)
- Discrete Structures(currently enrolled)
- System Security and Binary Analysis(currently enrolled)

The University of Tokyo, 2017/04 - 2022/03 — Tokyo, Japan

Bachelor of Science in Electrical Engineering & Computer Science
Studied computer science at Stanford University as an exchange student from 06/2019-08/2019
Wrote a senior thesis, "Type- and Sequential Effect-Guided Programming by Example," supervised by Prof Masahiro FUJITA

Relevant Courses

- Algorithms
- Artificial Intelligence
- Basics In Mathematics I/II
- Computer Networks
- Computer Software I/II
- Digital Circuits
- Distributed Systems
- Electronic Information Processing Devices
- Fundamental Exercise on Programming
- Graduation Thesis
- Hardware Design
- Image Media Technologies
- Information Security
- Information Theory
- Introduction to Algorithms
- Introduction to Python Programming
- Introduction to Statistics
- Language Processing I
- Operating Systems
- Probability and Statistics
- Programming Languages
- Statistical Machine Learning
- Theory of Computation

Work Experience

Software Engineer Intern, Indeed, 2022/06 - 2022/08 — Tokyo, Japan

Created a proof-of-concept data pipeline for its data infrastructure so that the data team and other teams could easily collaborate with the same API in different programming languages. The implementation allowed more people to analyze data in the company.

Software Engineer Intern, Hatena, 2022/02 - 2022/06 — Tokyo, Japan

Migrated CI/CD pipelines from Jenkins to GitHub Actions and sped them up, resulting in better production quality by improving the development cycle and increasing the number of reviews and deployments.

Software Engineer Intern, Q-Squared Technologies, 2021/06 - 2022/02 — Tokyo, Japan

Created a proof-of-concept for network acceleration. My work contributed to the decision about what the company would select as a network library for the company.

Software Engineer Intern, Mercari, 2020/08 - 2020/09 — Tokyo, Japan

Created a static analysis tool for the Go programming language.

Software Engineer Intern, FLYWHEEL, 2020/07 - 2020/08 — Tokyo, Japan

Introduced the speed layer of the lambda architecture in the corporate data platform. The new layer potentially expanded the corporate business because streaming data analytics was useful for real-time analysis.

Software Engineer Intern, Wantedly, 2019/08 - 2019/09 — Tokyo, Japan

Improved existing functions of Wantedly People, an HR application, and added new functionalities. Those new functionalities were related to user management and enabled the company to find malicious users.

Research Experience

"Type- and Sequential Effect-Guided Programming by Example," supervised by Prof. Masahiro FUJITA

Wrote the bachelor thesis on program synthesis. Implemented an ML-like target language in OCaml.
Its synthesizer used the language's type and effect system and given examples.

Projects

A toy C compiler written in C itself: ccc

Implemented a toy C compiler in C with a lexer, parser, and code generator.
It generates x86-64 code.

The top 3 in ICCAD 2021 CAD Contest

Teamed up with other lab members and worked on the circuit generation section in B4. Wrote evaluations of methods based on our criteria, actual statistics, and goal.
My main task was testing what combination of methods we should choose.

BrainF**k interpreter on Raspberry Pi written in Python: muscle_f**k

Implemented a Raspberry Pi application to enable people to get exercise while programming in B4

Implementation of TCP/IP protocol with KLab

Implemented TCP/IP protocol in C with mentors and other participants as an internship project in B4.

Implementation of bookmark functionalities to Firefox

Added additional bookmark functionalities to Firefox with another member from the same department as a school project in B3. Built Firefox and modified the source code.

Technical Skills

Programming Languages

= { C/C++, Common Lisp/Scheme/Racket, Coq, Go, HCL, Haskell, Java/Scala/Kotlin, JavaScript/TypeScript, OCaml, Python3, Ruby, Rust, Shell Script, }

Cloud

= { AWS(EC2, S3, Kinesis), GitHub Actions, }

Others

= { Docker, Flask, Flink, Kafka, OCamllex/Menhir, Pandas, Pandas, PyTorch, React, Ruby on Rails, Spark, scikit-learn, }

Interests

= { Formal Verification, Program Synthesis, Programming Languages, System Programming, Type Theory, }