Maizi Liao

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EDUCATION

University of Waterloo

Master of Applied Science in Computer Engineering

Waterloo, Canada May 2020 – June 2022

May zozo – June zozz

University of Waterloo

Bachelor of Applied Science in Electrical and Computer Engineering

Waterloo, Canada

Email: liaomaizi@gmail.com

 $September\ 2015\ -\ April\ 2020$

EXPERIENCE

University of Waterloo

Research and Teaching Assistant

Waterloo, Canada

May 2020 - June 2022

- $\circ~$ Conducted original research about the application of game theory on blockchains
- o Modeled the Algorand protocol as a Bayesian game
- o Proposed IRS, an incentive-compatible reward scheme for Algorand
- Studied equilibrium strategies under IRS and derived necessary conditions to incentivize participation
- o Improved the implementation of Malcolm, a cooperative load balancer at rack scale
- o Designed the quizzes and tutored the labs of ECE350, a real-time operating system course

Sumo Logic

Redwood City, USA

Cloud Backend Engineer

September 2019 - December 2019

- Worked in the Security and Analysis team to build a platform for monitoring security related logs
- $\circ~$ Developed a new feature to access external information about the logs
- Documented the design and the implementation of the new feature
- $\circ~$ Gained working experience with Scala, Spring, Avro and OpenAPI

Rakuten Tokyo, Japan

 $Software\ Engineer$

January~2019-April~2019

- $\circ~$ Worked in the AI Platform Development team to build a platform for managing chatbots
- o Developed and maintained backend APIs using JavaScript and TypeScript
- Leveraged Scala and Spark to provide KPI data of the platform and chatbots
- Implemented an ETL program in Go to process data for analytic usage
- Improved the performance of a history extraction microservice written in Python
- o Gained working experience with Google Cloud Datastore, Kafka and ElasticSearch

Mespere LifeSciences

Waterloo, Canada April 2016 - August 2018

 $Software\ Engineer$

• Leaded the development of a patient monitoring software using C# and WPF

- Refactored the software to reduce code redundancy and improve performance
- o Developed a prototype of the software on the Android platform using Java
- o Ported the software to Raspberry Pi using Python
- Visualized and analyzed sensor data using NumPy and SciPy
- Modified the firmware of the sensor in C to meet new requirements
- Helped the hardware engineer to automate the production process

PUBLICATIONS

• IRS: An Incentive-compatible Reward Scheme for Algorand

AAMAS 2023

• Malcolm: Multi-agent Learning for Cooperative Load Management at Rack Scale

SIGMETRICS 2023

AWARDS

• Terminal Midwest Regional, 12th Place

March 2021

• Terminal CMU vs. UWaterloo, 4th Place

September 2020

• Richard and Elizabet Madter Graduate Entrance Award

May 2020

• Univerity of Waterloo President's Scholarship

September 2016