Lyndon Shi

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Languages
C++, Go, Python

Technologies
Docker, Helm, Kubernetes

EDUCATION

University of Michigan — **Ann Arbor, MI**
Bachelor of Science in Engineering in Computer Science – GPA: 3.916 / 4.000 — *September 2016 – December 2019*

EXPERIENCE

Microsoft — **Redmond, WA**
Software Engineer II — *September 2021 – present*
Software Engineer — *February 2020 – August 2021*

- Architected and implemented components for deploying products built on Microsoft Research's Confidential Consortium Framework (CCF) into Kubernetes, providing foundational logic for at least three new Azure services.
- Drove REST API design and developed the public Azure Python SDK for Azure Confidential Ledger.
- Mentored an intern project that added the crucial ability to validate Azure Confidential Ledger's ledger files.
- Migrated build pipelines from the previous internal proprietary format to a new system based on Azure Pipelines.
- Created designs for managing and automating code upgrade and disaster recovery scenarios.
- Performed scale and performance testing to guide hosting model and disaster recovery designs.
- Contributed documentation and features to the open-source CCF.

Capital One — **Richmond, VA**
Software Engineer Intern in Cyber — *June 2019 – August 2019*

- Initiated and built the foundational codebase for a machine learning classifier to identify malicious JavaScript.
- Designed the database schema for storing cyber alert data consumed from an Apache Kafka streamer.
- Programmed an AWS Lambda in Python to store data consumed from the streamer into a Postgres database.
- Wrote Go code to programmatically build database tables, create views, and populate lookup tables.
- Designed and built a web dashboard and API using React for frontend and Go for backend.

Tome — **Ann Arbor, MI**
Intern at Tome through TechLab at Mcity — *September 2017 – December 2017*

- Developed wrappers to help team members interface with Google Maps APIs and MongoDB.
- Wrote Python scripts to analyze bicycle-vehicle collision data and download images at collision coordinates.
- Implemented a one class support vector machine for identifying roads dangerous for bicyclists.

RESEARCH EXPERIENCE

University of Michigan — **Ann Arbor, MI**
Research Assistant, Industrial and Operations Engineering — *May 2017 – July 2018*

- Designed and implemented (in Julia) optimization models to produce differentially private electrical network datasets. This research produced a paper published in IEEE Transactions on Power Systems recognized as a 2020 Best Paper.
- Extended functionality of existing C++ codebase to generate congested network test cases.
- Analyzed optimal power flow solution data to compare the efficacy of different models in congested networks.

University of Michigan — **Ann Arbor, MI**
Multidisciplinary Design Program Faculty Research Team — *January 2017 – December 2017*

- Engineered features for use in a deep learning classifier to identify messages injected into a vehicle's CAN bus.
- Implemented the deep learning classifier in TensorFlow, achieving >99% accuracy on our test datasets.

TEACHING AND TUTORING

- Instructional Aide, EECS 477: Introduction to Algorithms — Fall 2019
- Kiluk Proof Tutor, MATH 217: Linear Algebra — Fall 2018, Winter 2019
- Instructional Aide, ENG 100: Electronics for Atmospheric and Space Measurements — Winter 2018