

Alice Ran Zhou

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AREAS OF EXPERTISE

Languages & Frameworks: C++, Java, Python, Scala, MapReduce, Spark, Tensorflow, SQL, Zookeeper, Maven, Git

WORK EXPERIENCE

- Google**, Display Ads Infrastructure, *Software Engineer* Oct. 2018 – present
- Enabling unified display ads serving infrastructure for Google Marketing Platform
- Google**, Research and Machine Intelligence, *Software Engineering Intern* Jan. – Apr. 2018
- Trained a joint embedding model on Tensorflow, also generating eval sets to enable evaluation
 - Reduced code duplication by employing interfaces and functions with C++ variadic templates
- Google**, Display Ads Quality, *Software Engineering Intern* May – Aug. 2017
- Designed and implemented finer-grained segmentation for cross-cookie link discovery ratio calculations
 - Reduced link storage by 22% while maintaining neutral revenue impact
- Bloomberg**, Listed Derivatives, *Financial Software Developer Intern* Sept. – Dec. 2016
- Architected and implemented an end-to-end real-time system displaying market sentiment on binary events
 - Integrated a quantitative model that performs Gaussian mixture calculations using option market data
- LinkedIn**, Distributed Graph, *Software Engineering Intern* Jan. – Apr. 2016
- Researched and experimented with graph partitioning heuristics for the next-generation graph database
 - Drove design and implementation of ternary logic and keyword arguments of Prolog-esque query language
- Square**, Payment Products, *Software Engineering Intern* May – Aug. 2015
- Designed and implemented a deposit reconciliation system to ensure correct transfer of money
 - Managed concurrency concerning the settlement pipeline during database sharding using ZooKeeper

PROJECTS / RESEARCH

- Graph Database Benchmarking**, *University of Waterloo*, (GRADES [paper](#)) May 2016 – May 2017
- Simulated real-time, streaming behavior of transactional workloads via a Kafka-based update mechanism
 - Provided a Gremlin reference implementation for LDDB SNB Interactive Workload queries
- Warcbase**, *University of Waterloo* (JOCCH [paper](#)) Sept. – Dec. 2015
- Enabled accessible Spark data analysis for digital historians by building a fluent interface in Scala
 - Analyzed and visualized web archive link connections with Python and D3.js

EDUCATION

- University of Waterloo**, Bachelor of Computer Science, 3.91 cumulative GPA 2014 – 2018
- Select coursework: Big Data Infrastructure, Machine Learning, Concurrency, Algorithm Design and Analysis
 - Awards: Scotiabank Software Engineering Entrance Scholarship 2014 – 2017
 - Waterloo's largest engineering scholarship (\$20 000), awarded for student excellence
- Associate of the Royal Conservatory practical piano diploma**, Royal Conservatory of Music 2012