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, Research and Machine Intelligence, *Software Engineering Intern* Jan.–Apr. 2018
- Built and tuned a two-tower joint embedding model on Tensorflow
- Enabled quantitative comparison of various models by generating eval sets
- Reduced code duplication by refactoring, 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
- Extended in-house Prolog-like query language by supporting keyword arguments
- Drove discussion and implementation on the semantics of three-valued logic in the 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*, Research Assistant May 2016–May 2017
- Simulated real-time, streaming behavior of transactional workloads via a Kafka-based update mechanism
- Provided a Gremlin reference implementation for LDBC SNB Interactive Workload queries
- Co-authored a paper published in GRADES: http://dl.acm.org/citation.cfm?id=3078459

Warcbase, *University of Waterloo*, Research Assistant Sept.–Dec. 2015
- Built a fluent interface in Scala to make Spark data analysis accessible for digital historians
- Analyzed and visualized web archive link connections with Python and D3.js
- Co-authored a paper published in JOCCH: http://dl.acm.org/citation.cfm?id=3097570

EDUCATION

University of Waterloo, Bachelor of Computer Science, 3.91 cumulative GPA 2014–2018 (expected)
- **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