Xinyue Ou

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Education

- **University of California, San Diego** — La Jolla, CA
  Master of Science in Computer Science; GPA: 3.80 — *Sept 2017 – Mar 2019*
  - **Courses**Operating System, Database, Graduate Network, Neural Networks, Parallel Computing.
- **Shanghai Jiao Tong University** — Shanghai, China
  Bachelor of Science in Electrical and Computer Engineering; GPA: 3.89 — *Sept 2013 – Aug 2017*

Programming Skills

- **Languages**: C++, Java, Python, Scala, Javascript, SQL, Go.
- **Skills**: Distributed System, Multiprogramming, Consensus Protocol, NoSQL, Machine Learning
- **Tools**: Git, TensorFlow, PyTorch, Docker, Gradle, Maven, Django, ProtoBuf, ANTLR, Netty, Flume, gRPC.

Experience

- **Google, Inc.** — Mountain View, CA
  Software Engineer Intern @ Display Ads Infrastructure — *June 2018 – Sept 2018*
  - Developed MapReduce jobs in Go to process billion-scale user profiles and performed PetaByte-scale I/O with replicated and sharded storage.
  - Designed user data profile analyzing pipelines in C++ that fix 75% missing traffic tracking.
  - Deployed 10+ jobs through large-scale cluster management tools and executed phased rollout and A/B testing.
  - Implemented MVT pattern web application using Django along with Javascript and deployed on AppEngine.
- **Intel Asia-Pacific R&D Center** — Shanghai, China
  Software Engineer Intern @ BigDL Data Analytics — *Feb 2017 – July 2017*
  - Used Bash and Python to efficiently port Neural Network modules from Scala to Python.
  - Designed memory shared mechanism for buffers in Neural Network modules that saves 50% of memory usage.
  - Built a graph converter in Scala that converts machine learning models into graphs to accelerate the training of NN modules.

Projects

- **Tessaract: Triton Dropbox Service (Team Leader) - Java, gRPC** — *May 2018 – June 2018*
  - Implemnted simplified RAFT consensus protocol for server cluster leader election and log replication.
  - Designed an achitecture that separates storage server and client-handling server.
  - Developed server-client logics with gRPC and ProtoBuffer.
- **XQuery Processor (Team Leader) - Java, ANTLR** — *Feb 2018 – Mar 2018*
  - Developed XQuery compiler with ANTLR and Java JDOM2 to process XQuery and generate output.
  - Optimized join operator using Union Find to cluster joins and table size to determine join order.
  - Used gradle to set up the project and manage package dependency.
- **Multiprogramming Support for Nachos Kernel - Java** — *Oct 2017 – Nov 2017*
  - Designed a virtual memory management system that enables demand paging, lazy paging and page swapping.
  - Managed multithread programming using mutex, semaphore and conditional variable.
  - Implemented file-related and process-related system calls for Nachos kernel.

Side Projects

- **NewChain: A BitCoin Immitator - Java, Netty** — *July 2018 – Aug 2018*
  Implemented a bitcoin-like ledger service using Netty framework.
- **UCSD Class Schedule Calendar Generator - Javascript** — *Feb 2018*
  Designed a chrome extension that can generate a calendar file by parsing the web page of UCSD WebReg.
- **Gossip Membership Protocol - C++** — *Nov 2017 – Dec 2017*
  Implemented a gossip membership protocol in an emulated distributed system.