Lu (Angelina) Zhang

luzhang.cmu@gmail.com | +1 (818) 318 3092 | Pittsburgh, PA

EDUCATION

Carnegie Mellon University	Pittsburgh, PA
Master of Science in Electrical and Computer Engineering	01/14/2019 - *05/17/2020*
Northumbria University	Newcastle, UK
Bachelor of Science in Electrical Engineering and Automation	09/01/2017 – 06/13/2018
Nanjing Normal University	Nanjing, China
Bachelor of Science in Electrical Engineering and Automation	09/01/2014 – 06/30/2018

SKILLS

Languages: Java, Golang, Python, JavaScript, C, C++, SQL, HTML/CSS

Frameworks/Tools: Spring, Django, Database(HBase & Redis & MySQL), RocketMQ, Docker, MySQL, AWS, Git

EXPERIENCE

Alibaba Group—IOT Department [Employer: YuLong An]   Hangzhou, China
Software Development Engineer Intern;   *June. 2019 -- Aug. 2019*

o   Completed full-stack development on **Spring** framework using **Java** in technology export of API GWS distributed system program, mainly in flow control and log read/write function units.

o   Implemented and launched stand-alone thread count strategy and cluster QPS flow control strategy by counting on **Redis**.

o   Achieved async log read/write function based on **RocketMQ** message ache queue and stored in **HBase**.

o   Established data isolation and dynamic data source configuration based on **MySQL and RDS databases**.

o   Improved the log read/write function to sustained 100 thousand QPS. Deployed these two function units into production. Also passed mock throughput measurement test as Double Eleven shopping sprees' flow.

PROJECTS

Distributed System – CMU   *Aug.2019 – Dec.2019*

o   Implemented the **Raft** consensus algorithm (a replicated state machine protocol) from scratch using **Golang**.

o   Developed a Live Sequence Protocol, a homegrown protocol providing reliable communication with a client and server APIs based on **RPC**. And implemented a Distributed Bitcoin Miner consider load balancing strategy based on this protocol.

o   Developed a backend key-value store dealing with **concurrent queries** based on consistent hashing and sharding with a consistent caching protocol.

Search Engine Construction – CMU   *Feb. 2019 -- April. 2019*

o   Designed and implemented a text-based large-scale search engine indexed with Lucene API on corpus of 500,000+ documents from ClueWeb09 dataset using **Java**.

o   Evaluated query performance by metrics like MAP, MRR, NDCG and etc.

o   Improved the hit rate of query result to 93.3% performance by adopting Pointwise Letor (Learning-to-Rank) Algorithm, unsupervised pseudo relevance feedback strategy and SDM (Sequential Dependency Model).

Multithreaded Web Proxy Server – CMU   *Apr. 2019 -- Apr. 2019*

o   Designed a high performance and robust HTTP proxy based on C using the socket API.

o   Handled multiple concurrent requests and race conditions using the POSIX thread library.

o   Cached web objects based on least-recently used replacement policy.

Web Application Development – CMU   *Apr. 2019 -- May. 2019*

o   Built a fault-tolerant and user-friendly Chinese food delivery web service which offers an more efficient way to order meals for student.

o   Operated webpage using **Python, JavaScript, jQuery, Bootstrap** based on **the Django framework** in MVC model and used MySQL as the data storage.

o   Achieved real-time localization and post-comment interaction between users via **AJAX** le**ss** than 500 ms delay.

OTHER RELATED COURSES

o   Intro to machine learning for engineers; Algorithm I&II; High Performance Computing;