Chengyao Li

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SUMMARY

- Seeking summer 2019 full time position in software development. Graduate concentration on web development and database system.

EDUCATION

University of Michigan, Ann Arbor Sept. 2018 – Apr. 2020 (expected)

M.S. in Computer Science and Engineering

- Overall GPA: 3.5/4.0
- Coursework: Operating System, Database System, Web System, Artificial Intelligence, Advanced Algorithms

Shanghai Jiao Tong University Sept. 2014 – Jun. 2018

B.E. in Information Engineering, Zhiyuan Honors Program of Engineering

- Overall GPA: 3.6/4.0
- Studied at Cornell University in summer 2017 (GPA: 4.0/4.0)

WORK EXPERIENCES

Software Development Engineer Intern May 2019 – Jul. 2019

Amazon.com Services, Inc.

- Designed and implemented tool to fetch two types of logs and correlate them by unique ID; filtered logs through Python regex and stored matched logs into Amazon S3
- Provided user-friendly command line interface (CLI) to collect desired logs on demand
- Deployed the tool on three regions; reduced 75% operation time to collect same amount of logs; less configuration needed to collect logs
- Designed method to migrate the tool to PySpark on Amazon EMR platform; 90% less execution time expected

Research Assistant Sept. 2018 – Jul. 2019

Advised by Prof. Richard Neitzel *Department of Environmental Health Sciences, University of Michigan*

- Collaborated with researchers studying noise exposure; developed iOS application to measure workers' ability to hear sounds and understand speech in background noise; also allowing workers to report injuries on job
- Adopted Apple's ResearchKit framework to execute hearing tests and distribute questionnaire electronically; test and survey results saved into JSON for further analysis; helped and collected data from over 200 workers

PROJECT EXPERIENCES

Wikipedia Search Engine Jan. 2019 – Apr. 2019

Advised by Prof. Andrew DeOrio *Department of Computer Science and Engineering, University of Michigan*

- Designed and implemented multi-threaded MapReduce server in Python, and designed a series of mapper and reducer functions to calculate TF-IDF scores of source text files using implemented MapReduce server
- Converted calculated information into SQL table through sqlite3; built REST API with the help of Python Flask library, returning search hits based on search queries
- Constructed front-end search interface with React framework, supporting keyword input, URL parameter specification and wiki summary display; deployed on Amazon Web Services (AWS) into actual use

Multi-threaded Encrypted File Server Sept. 2018 – Dec. 2018

Advised by Prof. Peter Chen *Department of Computer Science and Engineering, University of Michigan*

- Modeled actual file server with Sockets; clients can send encrypted c-strings to server, asking server to create, read, write and delete files according to pre-designed protocol; server sends response once operation finishes
- Adopted multi-thread programming to handle clients' requests concurrently; used shared_mutex in C++17 and "hand over hand lock" principle to protect each data block from being modified by two threads at the same time

SKILLS & EXTRACURRICULAR ACTIVITIES

Languages C, C++, C#, Java, Python, MATLAB, HTML, SQL, JavaScript, Swift