Yuhong Zha

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Education

Carnegie Mellon University, School of Computer Science Pittsburgh, PA
Master of Information Technology Strategy Program *Aug. 2018 - Dec. 2019(Expected)*
GPA: **3.5/4.0**
Core Coursework: Introduction to Machine Learning, Distributed Systems, Search Engines

Purdue University, School of Science West Lafayette, IN
Bachelor of Science in Computer Science; Minor: Mathematics *Aug. 2014 - May. 2018*
GPA: **3.83/4.0**

Skills

Proficient: Java, C, Python, SQL Experienced: JavaScript, Express, Assembly Language
Familiar with the SCRUM Software development framework

Experience

Highmark Ticket Platforms, Carnegie Mellon University & Highmark Inc. Pittsburgh, PA
Scrum Master, Product Owner, Front-end Developer *Jan. 2019 - Aug. 2019*

Two websites for Highmark Inc. to enable automatic ticket generation and continuous monitoring of software security programs.

- Lead a team of 4 to design the architectures for the websites.
- Designed and built the ReactJS front-end and the restfulAPI to communicate with back-end.
- Worked as Scrum Master for the first half of the project and Product Owner for the rest of the project.
- Learned, practiced and adjusted Scrum Software Development cycle to fit our team.

Kihara Bioinformatics Laboratory, Purdue University West Lafayette, IN
Research Assistant *Oct. 2017 - Jul. 2019*

Imported MAINMAST plugin to Chimera for use in Bioinformatics Lab in Purdue University.

- Self-learned the plugin implementation technics for Chimera, a molecular modeling system.
- Developed a MAINMAST plugin GUI using Python Tkinter.
- Implemented the plugin to achieve full functionality of performing MAINMAST modeling methods.
- Delivered a poster presentation at Purdue University Bioinformatics Mini-symposium and earned the reward of "The Best Undergraduate Poster Presentation".

Selected Course Projects

Distributed Systems, Carnegie Mellon University Pittsburgh, PA - *Spring 2019*

- **File-Caching Proxy:** Designed and implemented a server with LRU file caching that allows remote clients to perform file read, modification, and deletion. The proxy ensures one-copy semantic.
- **Scalable Web Service:** Designed and implemented a 4-tier web server that autoscales according to the observed load.
- **Two-phase Commit System:** Designed and implemented a system with distributed transaction using two-phase commit. The system handles messages lost or delay and utilizes logging to persistent storage for failure recovery.

Text Based Search Engine, Carnegie Mellon University Pittsburgh, PA - *Spring 2019*

A QryEval Search Engine on a large scale of documents from gov2 and ClueWeb09 database. Evaluated each model's performance, analyzed and explored ways for improvements under different circumstances.

- Implemented retrieval models including Ranked/Unranked Boolean, BM25, Indri, LeToR etc.
- Trained a SVM classifier to rank documents, learning from features like tf-idf, PageRank etc.
- Supports Query Expansion and Diversification capabilities.
- Evaluated and analyzed different models using Metrics, including MAP, P@n, P-IA@n, αNDCG@n

E-Commerce System, Carnegie Mellon University Pittsburgh, PA - *Summer 2019*

A e-commerce back-end and database that minimizes the impact of increased demand and delivers reliable service consistently.

- Designed and built the back-end and database using NodeJS, Express Framework and MySQL.
- Deployed the System on Amazon Web Services(AWS), utilized EC2, RDS and Classic Load Balancer to ensure scalability and availability.