

Yi Meng

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Education

Carnegie Mellon University

Pittsburgh, PA

M.S. IN ELECTRICAL AND COMPUTER ENGINEERING; GPA: 3.31/4.0

May 2018 (expected)

- Courses: Cloud Computing, Introduction to Computer Systems, Web Application Development, How to Write Fast Code Data Structures for Application Programmers, J2EE Web Application Development

University of California, Irvine

Irvine, California

M.S. IN COMPUTER ENGINEERING (ONE SEMESTER, TRANSFER TO CMU); GPA: 3.43/4.0

Dec. 2016

- Courses: Principles of Data Management, Design and Analysis of Algorithms, Artificial Intelligence

University of Electronic Science and Technology of China

Chengdu, China

B.ENG. IN INTEGRATED CIRCUIT DESIGN; GPA: 3.97/4.0; RANK: 4/101

Jun. 2016

Skills

Languages

Proficient: JAVA, C; Familiar with: Bash, Python, C++, HTML; Basic: Scala, CSS, JavaScript

Tools

Hadoop, Spark, Django, Spring, Tomcat, Node.js, Kafka, Samza, Docker, Kubernetes, Bootstrap, Maven, Git

Databases

MySQL, HBase, MongoDB, SQLite

Internship

Mogujie, E-commerce Transactions Team

Hangzhou, China

JAVA BACKEND DEVELOPER (SPRING, KAFKA)

Jun. - Aug. 2017

- Improved database search queries, LRU cache and interface for reducing RT (from 100ms delay to 25 ms average).
- Checked referer header in page of confirming receipt for defending CSRF attack, based on configuring Spring annotation.
- Achieved displaying warehouse logistics track on the order details page, based on Mybatis.
- Designed a system for accessing Shunfeng delivery system, using gateway, Kafka and Spring framework.

Projects

Design of Draw & Guess Web Application (Python, Django, JavaScript), CMU

Fall 2017

- Built a Draw & Guess web application based on Django, supporting creating room, drawing, guessing and reconnecting.
- Achieved synchronization based on Websocket and Redis server. Implemented the game UI using HTML and Bootstrap.
- Built admin interface supporting CRUD operations and checking player drawing process based on AJAX.
- Deployed application into AWS, using Apache as proxy and Daphne as interface server.

Design of non-blocking Web Server (C), CMU

Fall 2017

- Designed a HTTP/1.1 web server to support GET, HEAD and POST methods following rules specified in HTTP RFC 2616.
- Achieved serving clients concurrently and running in daemon process.
- Implemented HTTPS via Transport Layer Security (TLS) and implemented Common Gateway Interface (CGI).

Twitter Big Data Analytics Web Service (Java, Mysql, Hbase), CMU

Spring 2017

- Implemented ETL process for 1TB Twitter data in JSON type using Hadoop MapReduce. Used Spark GraphX to accelerate calculation of social network relations between Tweets.
- Deployed Mysql and Hbase to support a RESTful web service based on Undertow web framework for 5 different queries, supporting over 10,000 RPS using AWS EMR, S3, EC2 and ELB.
- Enhanced performance by frontend caching, data replication and sharding, parameter tuning, region splitting, etc.

Stream Processing with Apache Kafka and Samza (Java, Kafka, Samza), CMU

Spring 2017

- Built an Uber like cab service that connects users with cab drivers, considering factors such as distance between the user and the cab driver, rating of driver, etc.
- Deployed Kafka cluster to receive the information of drivers' events and generate message streams.
- Deployed Samza to process Kafka broker streams and respond to a customer's request in real-time.

Cloud Storage Systems (Java, MySQL, HBase, MongoDB), CMU

Spring 2017

- Built distributed key-value stores and enabled strong / eventual consistency with help of timestamps.
- Deployed multiple coordinators to handle read / write / forward requests between clients and data centers.
- Designed social network web service over multiple types of databases: MySQL for user authentication, HBase for social graph, and MongoDB for user data.

Design of Database Management System (C++), UCI

Fall 2016

- Implemented a paged file (PF) system and a record-based file (RBF) manager. Achieved insert, delete, update operations.
- Implemented a Relation Manager and implemented an Index Manager, based on B+ tree. Achieved update, delete, insert and scan records based on index.
- Implemented a Query Engine. Achieved operations like Join, Group, Filter and Project.