

# Yijie Qiu

helen.yijieqiu@gmail.com | <https://www.linkedin.com/in/yijieqiu> | 415.823.1986

---

## EDUCATION

**CARNEGIE MELLON UNIVERSITY**  
MS INFORMATION SYSTEMS MGMT  
December 2015 | Pittsburgh, PA

**BS CHEMICAL ENGINEERING**  
May 2014 | Pittsburgh, PA  
Additional major in Economics and Statistics  
University Honors

## COURSEWORK

### GRADUATE

10605 Machine Learning Large Data Sets  
11642 Search Engine  
15619 Cloud Computing  
95702 Distributed Systems  
95877 Python for Data Analysis  
95736 Advanced Relational Database

### UNDERGRADUATE

15121 Data Structures in Java  
36402 Advanced Data Analysis  
36315 Statistical Graphics and Visualization  
06462 Optimization Modeling & Algorithms

## SKILLS

### TECHNICAL

#### PROGRAMMING LANGUAGES

Java  
Python  
Ruby  
Shell  
R  
MATLAB

#### TOOLS

Oracle Database & PL/SQL  
Redshift  
Hive  
MapReduce

### LANGUAGE

Native: Mandarin Chinese  
Fluent: English • Cantonese

## EXPERIENCE

### AMAZON | SOFTWARE ENGINEER, AMAZON SAGEMAKER

March 2017 - Present | Seattle, WA

- Contributed to the release of Amazon SageMaker at AWS re:Invent 2017
- Designed and implemented internal APIs and systems necessary for fleet security patching and infrastructure upgrades
- Designed and implemented service canaries for all SageMaker Hosting APIs, to continuously monitor service health and alert on anomalies
- Improved service scalability by introducing event-based notifications to asynchronous workflows

### AMAZON | SOFTWARE ENGINEER, DEVICE SERVICES

February 2016 - March 2017 | Seattle, WA

- Developed end-to-end encrypted, terabyte scale metrics ingestion pipeline, using AWS EMR, Redshift, and Hive
- Established load testing utilities for back-end services, and instrumented load tests in preparation of holiday peaks
- Maintained server-side and client-side metrics and logging components used by Amazon apps across various platforms (Fire OS, Android, iOS)

### AMAZON | SOFTWARE DEVELOPMENT INTERN, KINDLE XRAY

May 2015 - Aug 2015 | Seattle, WA

- Analyzed logs using MapReduce jobs to identify areas of improvement in text analytics pipelines
- Improved quality of pipeline outputs by implementing and querying from a Spring and Hibernate-backed AWS RDS database storing historic log data

## PROJECT

### ONLINE VOTING SYSTEM

Aug 2015 - Dec 2015

- Designed a scalable, encrypted, and verifiable online voting system, where each voter can verify that his/her vote is received and tallied correctly, without explicitly revealing the choice
- Built a prototype of the system using Java Swing for desktop clients, AWS EC2 with MySQL for servers, ElGamal encryption for data protection during transmission, and SCrypt for ballot verification

### TEXT SEARCH ENGINE

January 2015 - April 2015

- Programmed a Lucene-based search engine that supports common search operations like AND, OR, NEAR, and WINDOW
- Enabled search result ranking through Boolean, BM25, and Indri algorithms
- Optimized search results using query expansion and Learning to Rank