

# Qianhui Yu

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## EDUCATION

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| <b>Columbia University</b>  | <b>09/2019 – 12/23/2020</b> |
| • <b>M.S. in Electrical Engineering</b> , GPA: 3.78/4.00  | <b>New York, NY</b>         |
| • Courses: Analysis of Algorithms, Introduction to Databases, Cloud Computing, Computer Networks, Big Data Analytics, Introduction to Blockchain, Applied Deep Learning           |                             |
| • <b>Huazhong University of Science and Technology (HUST)</b>   | <b>08/2015 – 06/2019</b>    |
| • <b>B.S. in Electrical Engineering</b> , GPA: 3.76/4.00  | <b>Wuhan, CN</b>            |
| • Courses: Data Structures, Computer Architecture, Digital Signal Processing, Probability Theory and Statistics, Pattern Classification, Computer Vision, Artificial Intelligence |                             |

## SKILLS

**Programming Languages:** Java, Python, JavaScript, C/C++  
**Operating Systems:** Windows, Linux, MacOS      **Database:** MSSQL Server, MySQL, PostgreSQL, DynamoDB  
**Cloud Platform:** AWS, Azure, GCP      **Development Framework:** Spring Boot, Django, Flask  
**Other Technologies:** Spring Data JPA, Spring MVC, JUnit, Mockito, Hibernate, Maven, Git, Postman, Spark, HTML, Lucidchart, DBeaver, Socket Programming

## INTERNSHIP

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| <b>Walmart Inc. Sam's Club Technology</b>  | <b>06/2020 – 08/2020</b> |
| <b>Software Engineer Intern</b>  | <b>Bentonville, AK</b>   |
| • Redesigned and implemented the product database of the Recovery Rate Optimization team.                                    |                          |
| • Enabled the new database schema to meet new business requirements (Liquidator on-boarding and club configuration).         |                          |
| • Initiated a new microservice: Liquidator Profile Management with Spring Boot, Spring Data JPA, and SQL Server.             |                          |
| • Enabled associates to enter new liquidators into the system and to have more control of configuring liquidators' business. |                          |
| • Completed more than 30 liquidator swap and rate update requests involving about 20% of all active clubs.                   |                          |
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| <b>E-Navigation Information &amp; Technology Co., Ltd</b>  | <b>06/2019 – 08/2019</b> |
| <b>Software Engineer Intern</b>  | <b>Hangzhou, CN</b>      |
| • Implemented Ship Route Planning Module with Java, Spring Boot, and MySQL.  |                          |
| • Remodeled the ship route planning service using the Heap optimized Dijkstra Algorithm.                                     |                          |
| • Improved the response speed of route planning service (from the harbor to harbor) by 28.3% on average.                     |                          |
| • Initiated a new feature that enables our system to provide route planning service from any location to destination harbor. |                          |

## PROJECTS

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| <b>Intelligent and Secure Access System based on AWS (Python, JavaScript)</b>         | <b>10/2019 – 12/2019</b> |
| • <b>Backend:</b>   |                          |
| • Established visitor filter with Lambda Function, Amazon Rekognition, and Dynamo DB. |                          |
| • Enabled system to distinguish between strangers and known visitors.                 |                          |
| • Created visitor authentication workflow with Lambda Function and API Gateway.       |                          |
| • Enabled managers to authorize visitors' access.                                     |                          |
| • Enabled system to store new visitors' faces and send one-time-password.             |                          |
| • <b>Frontend:</b>  |                          |
| • Designed and Developed the visitor/manager portals                                  |                          |
| • Integrated two web pages with API Gateway and Swagger.                              |                          |
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| <b>Better Name More Money: Airbnb analysis (Django, Spark, HTML)</b>  | <b>10/2019 – 12/2019</b> |
| • Developed the web application using Django and generated the following listed functions' APIs for the application.  |                          |
| • Visualized significant words used in names of listings with high popularity by clustering and generating WordCloud. |                          |
| • Recommended words that could bring more popularity for householders.  |                          |
| • Generated Airbnb price heat map and crime heat map with Google API.   |                          |
| • Developed and tuned popularity prediction tools based on Random Forest and XGBoost.                                 |                          |
| • Achieved lower MAE from 1.21 reviews (baseline) to 0.63 using Cross-Validation and Grid-Search.                     |                          |
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| <b>Group shopping web application (Python, Flask)</b>  | <b>10/2019 – 11/2019</b> |
| • Designed and created the group shopping database in PostgreSQL.  |                          |
| • Implemented the demo functions including login, adding items, adjusting cart, placing orders, showing order history, and management mode with Flask. |                          |
| • Deployed the application on the VM in GCP.   |                          |