Qianhui Yu

(646) 3876786 | qy2226@columbia.edu | https://www.linkedin.com/in/qianhuiyu

EDUCATION

Columbia University **New York, NY**
- **M.S. in Electrical Engineering**, GPA: 3.78/4.00 **09/2019 – 12/23/2020**
- Courses: Analysis of Algorithms, Cloud Computing, Introduction to Databases, Big Data Analytics, Computer Networks, Introduction to Blockchain, Applied Deep Learning

Huazhong University of Science and Technology (HUST) **Wuhan, CN**
- **B.S. in Electrical Engineering,** GPA: 3.76/4.00 **08/2015 - 06/2019**
- 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: MySQL, PostgreSQL, DynamoDB
Cloud Platform: Amazon Web Service, Google Cloud Platform
Development Framework: Spring, Django, Flask
Other Tools / Technologies: Spark, HTML, Git, Swagger, Elastic Search, Lex, Socket Programming, Navicat

INTERNSHIP

Software Development Engineer Intern (Java) **06/2019 – 08/2019**
E-Navigation Information & Technology Co., Ltd
- Implemented Ship Route Planning Module with Java, Spring, SpringMVC, and MySQL.
- Remodeled the ship route planning service using the shortest path algorithm.
- Improved the response speed of route planning service (from harbor to harbor) by 28.3% on average.
- Initiated a new feature which enables our system to provide route planning service from any point to destination harbor.

PROJECTS

Intelligent and Secure Access System based on AWS (Python, JavaScript) **10/2019 – 12/2019**
- **Backend:**
  - 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.
- **Frontend:**
  - Designed and Developed the visitor/manager portals
  - Integrated two web pages with API Gateway and Swagger.

Better Name More Money: Airbnb analysis (Django, Spark, HTML) **10/2019 – 12/2019**
- 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.

Group shopping web application (Python, Flask) **10/2019 – 11/2019**
- 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.

Image Identification of Common Industrial Components (C++) **11/2017 – 01/2018**
- Modified the OTSU's Method for image segmentation and binarization.
- Enhanced stable operation of the system in different lighting environments
- Implemented erosion and dilation operation to solve regional adhesion problems.
- Achieved 92.8% accuracy in normal cases and 85.0% accuracy in regional adhesion cases.