HAOMIAO HAN

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EDUCATION

Cornell Tech at Cornell University, New York, NY — September 2019 - May 2021
Master of Science in Information Systems and Applied Information Sciences, *concentration in Connective Media* | GPA: 3.9
Relevant Coursework: Algorithms and Data Structures, Applied Machine Learning, User Experience and User Research, HCI and Design

College of Arts and Science, New York University, New York, NY — September 2015 - May 2019
Bachelor of Arts (Magna cum laude) in Computer Science and in Middle Eastern Studies | GPA: 3.82
Relevant Coursework: Agile Software Development and DevOps, Database Design and Web Implementation, Intro to Data Science
Honors/Awards: Dean's List for the Academic Year (every year from 2015 to 2019); University Honors Scholar

TECHNICAL SKILLS

Software Development:	Python (sklearn, pandas, numpy, spaCy, NLTK), Java, C
Web Development:	JavaScript (Node.js/Express, React, Redux), HTML, CSS (Bootstrap)
Data and Database:	DynamoDB, MongoDB, SQLite, MySQL, Tableau
Other Technical Skills:	AWS (CloudWatch, Comprehend, EC2, Lambda, S3, SNS), CI/CD, Prototyping (Sketch, Adobe XD), UI/UX research, Agile and Scrum methodologies, Windows, UNIX

EXPERIENCE

Amazon Web Services (AWS), ***Software Development Engineer Intern,*** Herndon, VA — May - August 2020

- Designed a pipeline for automatically labeling and resolving customers' tickets using machine learning and natural language processing techniques
- Implemented the ticket labeling pipeline with **Python** and **AWS Services** (Comprehend, DynamoDB, S3 and Lambda); the model achieved an accuracy of **87%**, labeled **150+** tickets per week, and helped the team resolve **22%** more tickets per week than before
- Designed and implemented a more intuitive and interactive help wizard page (using **React** and **Redux**) for users to self-troubleshoot their issues, which replaced the existing text-only pages and greatly improved customers' experience

ACADEMIC PROJECTS

U.S. Flight Delays and Cancellations Analysis (Python, Tableau) — Spring 2020
A data science project that aims to analyze and predict flight delays and cancellations

- Cleaned and analyzed a dataset with **18+ million** datapoints using **pandas** and **numpy**; created data visualizations on flight delay and cancellation trends using **Tableau**
- Performed feature engineering on the dataset and developed several machine learning models using **scikit-learn**; achieved an accuracy of **82.3%** when predicting flight cancellations

PerCent | Company Challenge provided by Mastercard (Sketch, JavaScript, HTML, CSS, MongoDB) — Fall 2019
A service that provides better financial inclusion to people without bank accounts in the U.S.

- Led the development process in a multidisciplinary team; conducted extensive research on the financial industry, generated **20+** ideas for the challenge, and performed value creation analysis and developed experimentation plans for the ideas
- Designed and developed a high-fidelity prototype for a mobile app using **Sketch**
- Implemented key features of the product with a full-stack web application, using **Node.js/Express** and **MongoDB**

TeachMe (JavaScript, HTML, CSS, MongoDB) — Spring 2019
A web app that connects creatively skilled individuals with those who have similar interests

- Wrote user stories and use cases and created wireframes for the product
- Led the development process and coordinated with team members by setting up the initial development environment, creating product backlogs, planning for each sprint, facilitating daily scrums and leading sprint reviews and team retrospectives
- Created and implemented user friendly front-end views using **React** and **Bootstrap**
- Designed **MongoDB** database schemas and implemented back-end APIs using **Node.js/Express** and **Mongoose**

Text Summarizer (Python) — Spring 2019
A program that automatically generates summaries for news articles

- Conducted research on text summarization techniques and experimented with different approaches to text summarization
- Created the text summarizer by first vectorizing words using **word2vec** (implemented with **spaCy.py**) and then performing **k-means clustering** (implemented with **scikit-learn**) to select the most representative paragraphs of the article
- Achieved a maximum accuracy rate of **0.6** (as measured by ROUGE-L F-Score), compared to a baseline of approximately 0.4-0.5

RateMyCards (JavaScript, HTML, CSS, MongoDB) — Fall 2018
A web app that recommends users the best credit cards according to their monthly spending habits and credit scores

- Built a full-stack web app with **Node.js/Express, MongoDB** and **Bootstrap**; implemented page templating with **Handlebars.js**
- Integrated user registration and authentication with **Passport.js**