CHI FENG

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EDUCATION

Cornell Tech, New York, NY — May 2022
Master of Engineering in Operations Research and Information Engineering | GPA: 3.8

University of California, Davis, CA, Davis — April 2021
Bachelor of Science in Applied Mathematics | GPA: 3.7

TECHNICAL SKILLS

Coding Language: Python, Java, JavaScript, TypeScript, CSS, HTML, R, SQL, MATLAB
Other Tools: React, Node.js, Git, AWS, Cypress, SpringBoot, Redis, RocketMQ, NumPy, Sklearn

EXPERIENCE

Amazon Luna, Software Development Engineer, Irvine, CA — Aug 2022 – Dec 2022

- Developed front-end (React) web features including a complete rewrite of the Luna developer portal.
- Implemented automated testing to achieve continuous integration and delivery by increasing unit test coverage.
- Applied integration tests that eliminate QA test time and achieve CI/CD for the pipeline deployment.
- Contributed to back-end features including new API validations in the Luna game publishing service.
- Utilized AWS services including S3, CloudWatch, and Lambda to deliver AWS resources for use in production code.

Aerofugia Aircraft, Research and development Intern, Chengdu, China — Jun 2020 – Oct 2020

- Developed a mathematical model to simulate the local interaction of an Unmanned Aerial Vehicle swarm.
- Designed UAV information-sharing patterns using message queues to minimize the computational burden.
- Applied the developed model to present common steering behaviors of autonomous swarms to achieve complex flock tasks.
- Conducted a 20-page industry research report.

COURSE PROJECTS

Flash Sale System, (SpringBoot, Mybatis, MySQL, Redis, RocketMQ, JMeter, Sentinel) — Fall 2021
Built a flash sale website from scratch using SpringBoot

- Built the project environment with SprintBoot; applied MyBatis to generate MySQL database tables.
- Integrated Redis caching and message queue middleware (RocketMQ) to process requests with high concurrency and large flow.
- Incorporated Alibaba Sentinel to throttle extensive requests and improved the stability and reliability of the system.
- Stimulated queries and performed stress test using JMeter.

Large-scale Image Search Engine, (Python, NumPy, Pandas, Sklearn) — Fall 2021
Built a ranking framework for relevant images with given natural language queries

- Extracted numerical features from 10,000 images using pre-trained Residual Network (ResNet) and performed PCA.
- Applied natural language processing and converted text to numerical features using the word2Vec technique.
- Trained models like kernelized ridge regression and SVM to make predictions and evaluate performance.
- Used different distances metrics to rank relevant images with an accuracy of 0.5.

Sentiment Analysis of Online Reviews, (Python, NumPy, Pandas, Sklearn) — Fall 2021
Investigated thousands of online reviews and extract subjective information to understand online ranking behaviors.

- Applied NLP techniques and vocabulary approaches on user's online reviews.
- Designed a Bag of Words Model and extracted features in searching for language patterns.
- Implemented the naive Bayes model and trained logistic regression with the highest accuracy of 0.755.
- Built-up a 2-gram model repeating classification processes and conducted algorithms comparison and analysis

CitiBike Stations Stationary Analysis, (Python, NumPy, Pandas) — Spring 2021
Modeled the Markov Chains to study the availability of bikes in CitiBike stations

- Cleaned and identified relevant data from millions of trip data.
- Modeled the available bikes in *CitiBike* stations with Discrete Markov Chain.
- Estimated the steady state of the available bikes and the transition probability for different time blocks.
- Predicted ride patterns and popularity among different *CitiBike* stations.