Dengyang (Edison)Xu

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Education

Georgia Institute of Technology	Aug 2022- May 2024(Expected)

Master of Science in Computational Science & Engineering

University of California Santa Barbara	Oct 2019- Mar 2021

Bachelor of Art, Economics

Skills

Language: Java, Python, JavaScript, Typescript, HTML/CSS, R, SQL
Frameworks: React.js, React Native, Spring Boot, Django, Flask, Node.js, Express.js, PyTorch
Database/Big Data: MySQL, PostgreSQL, MongoDB, Redis, PySpark, DynamoDB, Firebase
Developer Tools: Docker, Kubernetes, Git, AWS, Google Cloud Platform, Android Studio, Linux

Projects

GeekLib: AI-Enhanced Library Management System   Nov 2022- Jan 2023

- Developed a full-stack library web app with **React** and **Spring Boot**, enabling CRUD functionality, review, comment, and loan/return features, connected via a **RESTful API** for efficient communication.
- Integrated Okta's Authentication API with Jason web token and Stripe's Payment API to provide secure user authentication and reliable processing of credit card payments for book late fees.
- Utilized Maven for streamlined dependency management and **Spring Data JPA** to interact with **MySQL** database.
- Created an AI assistance agent using OpenAI's GPT-3 API for intelligent user support.
- Deployed the app on AWS with Amplify and Elastic Beanstalk, implementing **CI/CD** for efficient development.

Whales Chat: An Instant Messaging Mobile App   Nov 2022- Dec 2022

- Developed an instant messaging mobile app using **React Native**, Expo, and **Redux** for state management of components and scalable architecture, resulting in a high-performance and responsive user interface.
- Integrated **Firebase** as a backend for real-time messaging and NoSQL data storage, including user authentication, secure messaging data storage, and image storage.
- Improved the app's usability and interactivity by incorporating key features such as user search, real-time group chat, customizable user profiles, and local notifications for new message.

Interactive Map Visualization for Taxi Trip Analysis   Sep 2022- Dec 2022

- Build an interactive web-based tool using the **Flask web framework**, along with Dash and Plotly for UI design, to analyze the temporal and spatial relationships between taxi trips and city popularity in Manhattan.
- Processed and cleaned 30.8 million taxi trip records using **PySpark** and improved regional analysis accuracy by integrating data from the Google Popular Times API.
- Managed databases interactions using **SQL Alchemy**, implemented a multi-regression model for estimating missing taxi trip coordinates, and developed a user-friendly interface with customizable filters for data analysis.

Professional Experience

ChineseInvestors.com Inc.	July 2018-Dec 2018
Data Analyst	San Gabriel, CA

- Spearheaded the creation of market cycle model to effectively visualize stock trends, incorporating time series analysis of the strength, direction, and energy elements.
- Analyzed over 10 million stock market records using SQL and NumPy/Pandas for data manipulation. Employed cross-market validation and trading volume analysis to generate valuable insights and identify correlations.
- Produced and delivered daily market summaries and analysis videos to a subscriber base of 43,000, providing valuable information and insights to support investment decisions. Subscriptions increased by 23% during the period.

Relevant Coursework

Data Structures and Algorithms	Information Security	Machine Learning	Database Systems
Object-oriented programming	Cloud Computing	Modeling&Simulation	Data Analysis