

# 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, Postman, Linux

## Projects

**InvoicePro: MERN Stack Invoice Management System**

Demo: [www.inovicepro.me](http://www.inovicepro.me)

Mar 2023- Apr 2023

- Developed a comprehensive invoice management system using **MongoDB, Express, React**, and **Node.js**, focusing on user management, dynamic invoice generation, and revenue tracking capabilities.
- Integrated **ReduxToolkit** Query and **Docker** Compose for optimized API calls and scalable architecture.
- Enhanced user authentication with refresh tokens strategy, Google social auth, and email verification service.
- Applied NGINX reverse proxy and load balancing techniques, achieving efficient logging with Morgan and Winston, and production environment optimization

**GeekLib: AI-Enhanced Library Management System**

Demo: [www.geeklibr.com](http://www.geeklibr.com)

Dec 2022- Jan 2023

- Developed a full-stack library web app with React and **Spring Boot**, enabling CRUD functionality, review, comment, loan/return features, and connected via a **RESTful API**.
- Incorporated Okta auth API, JWT, and Stripe API for secure user authentication and credit card payment processing.
- Utilized Maven for efficient dependency management and **Spring Data JPA** to interact with **MySQL** database.
- Implemented AI assistance with GPT-3.5 API, deployed the app on AWS using Amplify and EC2 for **CI/CD**.

**Whales Chat: An Instant Messaging Mobile App**

Nov 2022- Dec 2022

- Build a high-performance instant messaging mobile app using **React Native**, Expo, and Redux for scalable architecture and responsive UI.
- Utilized **Firebase**'s advanced features for real-time messaging, secure user authentication, and scalable NoSQL data storage, including end-to-end encryption for messaging data.
- Implemented innovative features such as intelligent user search, dynamic group chat, customizable user profiles, and local notifications for an enhanced user experience.

**Interactive Map Visualization for Taxi Trip Analysis**

Sep 2022- Dec 2022

- Create an interactive web-based tool with **Flask**, Dash, and Plotly to analyze 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 database interactions with **SQL Alchemy**, estimated missing coordinates with a multi-regression model, and developed a customizable UI 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.