

MANIVANNAN PRUSHORTH

425-625-4261 | prushort@usc.edu | [Portfolio Website](#) | [LinkedIn](#) | [Github](#)

Education

University of Southern California, USA: Master of Science in Computer Science

Aug 2023 - May 2025

King's College London, UK: Bachelor of Science in Computer Science

Sep 2020 - Jun 2023

Skills:

- Java | Python | HTML | CSS | JavaScript | Bootstrap | Django | React | TypeScript | C++ | SQL | NoSQL
- Swift | SwiftUI | Angular | Node | Express | MongoDB | C# | JUnit | Webpack | Frontend | Backend | Mobile

Projects

Stock-Exchange Web App - Angular, Node, Express, MongoDB, TypeScript, Bootstrap **Feb 2024 - Apr 2024**

- Parallelized 7 API requests to show stock data by using fork join after an auto-complete debounce search.
- Polled stock price data every 15 seconds when the market is open by using the Pub-Sub design pattern.
- Reduced latency of data by 4 seconds using local storage for charts API so prevented API rate limits.
- Performed stock transactions which updates the amount of stock, current prices and total money left.
- Showed alerts when saving or deleting to the watchlist which then refetches API data to prevent staleness.

Stock-Exchange iOS Mobile App - Swift, SwiftUI, Node, Express, MongoDB, JavaScript **Feb 2024 - Apr 2024**

- Reduced Alamofire search API requests by using DispatchWorkItem to search for a symbol every 500ms.
- Used WebKit to call a JavaScript function and load 2 HTML pages which show a tab view of chart data.
- Displayed toast alerts based on 5 different invalid entries when performing stock transactions.
- Created sheet view for successful transactions and when a user saves a stock to their favorites.

ChatNow iOS Mobile App - Swift, SwiftUI, Firestore

Jan 2024 - Feb 2024

- Integrated NoSQL Document Firestore database to save and retrieve chat messages for a user's group.
- Implemented an upload images feature so that a user could send images in their message.
- Used Firebase authentication for sign-up and login views.

Realtor-Zillow Google Chrome Extension - React, TypeScript, Material UI, Jest, Webpack **Nov 2022 - Mar 2023**

- Deployed at <https://chrome.google.com/webstore/detail/real1/ojbbkajfjaohmhffklknfipdhfenbkhe>
- Designed to pick a choice among 5 nearby places for a house such as food and to vary 6 filters like cuisine.
- Displayed Google Cloud Nearby API data on a series of cards below the filters and can view a photo.
- Achieved 100% code coverage with 144 integration and unit tests by using Jest for asynchronous code.
- Saved \$5/week by mocking API responses and blocking network requests during each set of test runs.

Book Recommender Web App - Python, HTML, CSS, JavaScript, Django, SQLite

Feb 2022 - Mar 2022

- Managed and led a team of 7 to build a web-app to recommend books to users and to book clubs.
- Selected SVD out of 12 algorithms as it performed better on 62% of offline metrics used.
- Decreased time by 5 minutes to generate recommendations by employing batch learning in deployment.
- Minimized RMSE score to 1.58 having started with a book ratings scale from 1 to 10.
- Filtered 1 million book review dataset to 200,000 book reviews by using Pandas library.

Relevant Courses:

- Algorithms | Data Structures | Web Technologies | Databases | Optimization Methods | Software Engineering
- AI | Operating Systems | Concurrency | Machine Learning | Cryptography | Statistics

Awards:

- LAMDA Public Speaking Grade 6 Distinction | National Citizen Service Challenge | Piano ABRSM Grade 5

Volunteer Experience:

- Collaborated with 3 teachers to organize 7 sports events at Foxborough school for the student leader job.
- Supervised 10 elderly patients and caregivers in weekly meetings at Dr French Memorial Home.
- Teamed up with Oxfam Charity and 5 others to negotiate and sell used clothes to customers.