WINSTON TRINH

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EDUCATION

University of Southern California, Viterbi School of Engineering December 2024
Bachelor of Science - Computer Science GPA: 3.57
Coursework: Software Engineering, Operating Systems, Algorithms, Data Structures, Artificial Intelligence, Discrete Mathematics, Professional C++, iOS App Development, Internetworking, Embedded Systems, Probability, Programming GUI's

EXPERIENCE

USC Sol Price School of Public Policy Los Angeles, CA
Research Assistant July 2024-December 2024
- Process and analyze large-scale datasets exceeding 100 GB using Python and Polars to reduce data processing time
- Develop and implement predictive models using scikit-learn and linearmodels to support nonprofit budget forecasting analysis

Sandlines Remote
Software Engineer Intern August 2023-July 2024
- Developing a full-stack React Native app for candidate-voter communication that amplifies voter impact in US elections
- Built a full-stack landing page using React.js to increase user engagement by 30% during beta testing phase
- Implemented end-to-end database management by connecting landing page to Firebase Backend through Firestore API, which supports over 100 active users
- Collaborated with two other developers using Agile framework (Scrum) and Jira ticketing to ensure seamless synchronization between website and mobile app

CS@SC Los Angeles, CA
Teaching Assistant for USC Viterbi School of Engineering June 2022-July 2024
- Lead weekly classes of up to 15 students spanning K-12th grade, teaching various computer science topics ranging from Scratch to Java/Python
- Design lesson plans for 200+ students with interactive programming problems and homework to support practical learning
- Advise in development of Game Design using Unity with C# and Level 1 Python by recording 3 educational videos

PROJECTS

Temperature Forecaster Los Angeles, CA
Python, Flask, sklearn.ensemble, matplotlib, pandas, numpy November 2023
- Engineered a Flask web app to visualize the monthly temperatures from 2016-2020 of major cities in the world
- Implemented scikit-learn to create a projection and forecast future temperatures based on the user's input for date

JoesTable Los Angeles, CA
Java, Spring Boot, MySQL, HTML/CSS/JavaScript November 2023
- Coded an interactive web application with Yelp API for dynamic restaurant search and management, enabling users to find restaurants, add favorites, and schedule reservations
- Integrated Google Maps API to allow location search via latitude and longitude coordinates and providing a visual map overview to enhance user experience
- Initialized a MySQL database to securely store and manage user data, including credentials, emails, lists of favorite restaurants, and reservations

Traveling Trojan Los Angeles, CA
C++ October 2023
- Engineered a Genetic Algorithm-based path optimization project with functional programming
- Created initial population and fitness evaluation for route optimization from a list of 20+ locations
- Implemented selection, crossover, and mutation functionality, resulting in up to 5% path optimization between generations
- Minimized total path distance by 37.6% after 200 generations

SKILLS

Languages: C/C++, Python, Java, Swift, TypeScript, SQL, JavaScript, HTML/CSS, Dart
Technologies: Git, Docker, GitHub Actions (CI/CD), Linux, React.js, Next.js, Tailwind, Spring Boot, Flutter, Flask, Maven, JUnit, Selenium, Postman (REST), pandas, Polars, OpenAI API, scikit-learn, AWS EC2