

# WINSTON TRINH

Beaverton, OR 97007 | (971) 727-5784 | wntrinh@usc.edu  
linkedin.com/in/winstontrinh | winstontrinh.com | github.com/winston-trinh

## EDUCATION

### University of Southern California, Viterbi School of Engineering Bachelor of Science - Computer Science

Los Angeles, CA  
December 2024

Coursework: Software Engineering, Operating Systems, Algorithms, Data Structures, Artificial Intelligence, Discrete Mathematics,  
Professional C++, Internetworking, Embedded Systems, Probability, iOS App Development, Programming GUI's

## EXPERIENCE

### USC Sol Price School of Public Policy Research Assistant

Los Angeles, CA  
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

### Freelance Software Developer

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

### JoesTable

Los Angeles, CA

Java, Spring Boot, MySQL Workbench, HTML/CSS/JavaScript, JUnit, Cucumber, Selenium

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 with unit and system tests.

### 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

### 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, SQL, TypeScript, JavaScript, HTML/CSS, Swift, Dart

Frameworks: React.js, Next.js, Spring Boot, Flask, Flutter, JUnit, Cucumber, Tailwind

Tools: Git, Docker, Linux, GitHub Actions (CI/CD), Jira, AWS EC2, Postman, Maven, Supabase, Firebase

Databases: MySQL Workbench, PostgreSQL, Firestore (NoSQL)

Concepts: Agile/Scrum, REST APIs, Algorithms, System Design