# PETER KALLOS

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#### **PROJECTS**

#### **CALIFORNIA TRAFFIC APP - SOLO DEVELOPER**

July 2024 - August 2024

- Developed a full-stack, map-based mobile app for Android and iOS with React Native/Expo and Typescript
  using traffic data provided by Caltrans and CHP for up-to-date information on California's highways
- Profiled the app with React Developer Tools and optimized performance via component memoization. Utilized
  Google Maps SDK and React Native libraries for real-time user location and marker clustering. Integrated
  AsyncStorage and React's Context API for persistent user preferences and state management when setting theme
- Created custom components for permissions and support modals, app theme, and traffic details pages. Designed custom UI elements including icons, map styles, and buttons

## **TASK MANAGER API - TEAM MEMBER**

May 2024 - June 2024

- Developed an end-to-end, RESTful API for general task management with a team of three student developers
- Implemented concurrency control to ensure transaction isolation and carried out performance tuning, improving query execution times by 90%
- Designed comprehensive example flows and user stories, and created an ER diagram for the database schema

## **VIRTUAL WORLD** - SOLO DEVELOPER

Oct 2023 - Dec 2023

- Optimized pathfinding functionality by implementing a custom A\* search algorithm, enhancing navigation for various entities within a 2D simulated world
- Refactored codebase adhering to object-oriented design standards; improved code maintainability, readability, and scalability

# INTERACTIVE CAMPUS MAP APP - TEAM LEAD

Sep 2022 - May 2023

- Led a team of eight student developers in creating a location-based, interactive map application. Distributed tasks using Trello, and utilized Android Studio/GitHub for creation/collaboration; resulted in a successful closed alpha launch and funding from Northrop Grumman for \$10,000
- Integrated Google Maps SDK and used its FusedLocationProvider API with Android's Location API for displaying the user's real-time location
- Created filters for and dynamically revealed POIs based on user proximity. Determined nearest parking from user
  and parking lot coordinates, implemented persistent data storage for saving parking locations with Flutter's
  SharedPreferences plugin
- Migrated codebase from native Android to Flutter app for iOS compatibility

#### SKILLS

Languages: Typescript, Javascript, Java, Python, C, C++, PostgreSQL, HTML, CSS, XML

Developer Tools: React Native, Expo, React Developer Tools, Google Cloud/Play Console, Supabase, Docker, Android Studio, Android/Google Maps SDK, Git/GitHub, VIM, Visual Studio, VS Code, Unity, Trello, Figma Fundamentals: Profiling, OOP, Algorithm Design, Data Structures, Unix, Unit Testing, Debugging

## **EDUCATION**

#### CALIFORNIA POLYTECHNIC STATE UNIVERSITY, SAN LUIS OBISPO

San Luis Obispo, CA

B.S. in Computer Science Cumulative GPA: 3.904 Sep 2023 - June 2025

**Relevant Coursework:** Design and Analysis of Algorithms, Introduction to Database Systems, Systems Programming, Theory of Computation, Project-Based Object-Oriented Programming and Design

# ANTELOPE VALLEY COLLEGE

Lancaster, CA

A.S. in Computer Science - Mathematics - Physics

Aug 2021 - May 2023

Cumulative GPA: 4.0; Summa cum laude; President's List 2021-2023; Subject Area Award for Computer Science **Relevant Coursework:** Java Programming & Algorithms, C/C++ Programming, Data Structures, Assembly Language & Computer Architecture, Discrete Mathematics, Linear Algebra, Calculus, Physics