

Tran Tran

Corvallis, OR | Contact: 971-329-0664 | quertran.tran1009@gmail.com |

Portfolio: <https://doubletran.github.io/>

Education

Oregon State University, B.S in Computer Science

Expected September 2025 – GPA: 3.96

Coursework: *Cloud Application Development, Introduction to Database, Information Visualization, Operating System I & II, Computer Network, Machine Learning.*

Work

Extended Reality Lab | Research assistant

10/2024 - NOW

- Created a pipeline of rule-based modeling from CityEngine to batch-generate suburban houses in residential zones, dynamic streets, and powerlines from OpenStreetMap dataset.
- Integrated C++ scripting to query points of interest (POIs) and real time NOAA weather data via web requests to enrich users' navigation experience.

Physical Chemistry Lab | Software developer

06/2024-09/2024

- Designed and implemented a custom LabVIEW program to interface with an electron detector, enabling precise capture of high-resolution experimental data for physical chemistry research.
- Leveraged Python integration to automate real-time image acquisition and numerical computations across Linux and Window servers, ensuring synchronization, and timely transfer of raw signals for triggering and post-processing.

Oregon State University Extension and Engagement | Web developer

08/2023 – 10/2024

- Developed and maintained the Outdoor School application system using Salesforce Lightning Web Components and Apex class, applying object-oriented design principles for maintainability and reuse.
- Customized role-based user interaction to ensure secure and intuitive access for different stakeholders.
- Participated in sandbox and release and unit testing development workflows to support reliable deployment.

Projects

Ocean Visualization with Shaders (ArcGIS Pro, OpenGL)

- Utilized ArcGIS Pro to extract and preprocess oceanographic datasets, applying geoprocessing tools and statistical methods to convert ocean flow and temperature data into color-encoded textures.
- Developed a custom shader pipeline implementing the 2D Line Integral Convolution (LIC) technique to visualize ocean currents and temperature gradients on a 3D sphere.

Environmental Awareness Social Media (SQL, React Native, Google Maps API)

- Designed a React Native mobile application, enabling users to raise public awareness about environmental activity in their local community by reporting environmental problems, hosting events to solve local problems.
- Developed a database management system using Handlebars and SQL for users to perform Create-Read-Update-Delete functionalities.

Oregon Crash Dashboard (Power BI, ArcGIS API for Python)

- Conducted applied spatial data analysis on 2020 Oregon crash data using Power BI, producing an interactive dashboard for multidimensional insights across severity, time, and location.
- Engineered dynamic filtering, multi-view coordination to analyze correlations between posted speed limits, crash severity, and regional patterns.

Skills & abilities

- Programming Languages: Python, JavaScript, C, C++, SQL, Java
- Front-End: React.js, HTML, CSS, Salesforce Lightning Web Components
- Back-end: Node.js, Express, Flask, RESTful APIs, Salesforce Apex Class
- Databases: MySQL, MongoDB, Firebase
- DevOps & Tools: Docker, Git, GitHub, Salesforce CLI (SFDX), Linux (Debian, CLI, Shell scripting)
- GIS & Mapping: ArcGIS Maps SDK for JavaScript/Python, ArcGIS SDK for Unreal Engine, ArcGIS REST API, GeoJSON, Google Maps API
- 3D Graphics & Simulation: OpenGL, Unreal Engine 5, Virtual Reality (VR) / Augmented Reality (AR) integration