ALVIN LAI

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Education

Loyola Marymount University

B.S. in Computer Science, GPA 3.50   Dec 2020

Skills & Technologies

- Python, JavaScript, C++, Java, SQL
- React Native, Node.js, Bootstrap
- PostgreSQL, MongoDB, Neo4J

- Git, GitHub
- Linux, Mac, Windows
- Agile Development

- Web and Desktop App Development
- Object-oriented Design
- Data Structures, Algorithms

Projects

Audio Synthesis Web Application   Aug 2020 - Dec 2020

Worked in a team of 4 to develop a web application for exploring core sound design concepts such as waveform timbre, ADSR, filtering, and frequency modulation.

- Developed a web client for audio synthesis using Node.js, React, and open source libraries.
- Created reactive GUI components that dynamically update synthesizer output.
- Built and styled a web page with a virtual keyboard synthesizer using Bootstrap and HTML/CSS.
- Contributed to requirements gathering, system design, documentation, and demonstrations.

Database Course Projects   Aug 2020 - Dec 2020

Gained hands-on experience with popular database technologies.

- Developed ETL scripts, aggregate analysis queries, and DAL programs that implement CRUD interfaces for PostgreSQL, MongoDB, and Neo4j.
- Optimized slow queries by using profilers to identify inefficiencies.
- Developed client applications that use the DAL to retrieve and display metrics to the user.

Content Management System   Jan 2020 - May 2020

Worked in a team of 6 to develop a content management system and web application for park staff to create configurable multimedia modules about nature parks, museums, and landmarks.

- Developed a feature to retrieve and display content from nearby landmarks using Google Maps API
- Implemented event listeners to update content displayed on webpage.

Music Suggestion Web Application   Aug 2018 - Dec 2018

- Developed a web application using JavaScript, React, and a music AI API to suggest songs with similar qualities (key, tempo, genre, and energy) based on the user's selected song.

Experience

Office Clerk & Assistant • Hawk Contracting Group • Honolulu, HI   Jun 2019 - Aug 2019

- Wrote scripts to extract 3D displacement data from a logger using PowerShell and the sensor API.