Bryan Rhoelle Bergenholtz

brbergenholtz.19@gmail.com | (562) 316-9385 | linkedin.com/in/bryanbergenholtz/ | github.com/YanRho

EDUCATION

California State University - Long Beach
B.S. in Computer Science, *May 2025*

EXPERIENCE

Terravan Solar   **June 2023 - May 2024**
Software Engineer Intern

- Built embedded system features by parsing JSON over USB serial between Arduino ESP32 and Android devices, enabling battery diagnostics and real-time monitoring.
- Integrated and optimized a JdbBms C++ library to communicate with JBD battery Management Systems over Universal Async Receiver/Transmitter, allowing access to live voltage, current and other metrics.
- Contributed to feature development and debugging through weekly stand ups and collaboration, improving code reliability and clarity in a fast-paced environment.

PROJECTS

Budget & Expense Tracker   **May 2025 - current**

- Built a cross-platform budgeting app using React Native, FastAPI, and MongoDB, allowing users to manage transactions and visualize budgets from mobile devices.
- integrated the Plaid API to securely fetch bank transactions, balances, and account metadata, eliminating manual entry and enabling automatic financial syncing.
- Generated personalized spending insights using Pandas and categorized data, helping users understand trends and improve budgeting decisions.

3D Solar System Diorama   **April 2025 - May 2025**

- Simulated a 3D solar system using Modern OpenGL 3.3+ and C++, featuring orbiting the sun and orbiting planets, mouse camera controls, and shaders & textures for real-time lighting.
- Rendered planetary models using Assimp for 3D assets and GLSL shaders, achieving a decent FPS rate on mid-range machines.
- Improved user experience by implementing orbit and zoom camera logic, enhancing interactivity during classroom demos.

SRB Construction and Engineering Services Website   **June 2024 - January 2025**

- Built and deployed business website using Next.js and Tailwind CSS, providing the client with a modern online presence accessible across devices.
- Translated client requirements into interactive UI/UX components by gathering feedback through meetings and prototyping sessions, ensuring alignment between technical delivery and business goals.
- Refined layout and navigation through iterative testing and revisions, resulting in a polished and user-friendly interface.

Full Stack Messaging Web App - CSULB Senior Project   **January 2024 - December 2024**

- Built a real-time message app with file sharing and authentication using Next.js, Node.js , and RESTful APIs, successfully demonstrated in a local staging environment.
- Used PostgreSQL via NeonDB to store chat history and user metadata, achieving a low response times in QA testing.
- Collaborated in a 5-person SCRUM team using Jira and Github, delivering over 10 project milestones on schedule.
- Tested core features locally including message delivery, login flow, and file uploads, ensuring functional stability throughout development.

TECHNICAL SKILLS

Programming Languages: JavaScript, Python, C++, C#, HTML, CSS
Frameworks: React, Next.js, ASP .NET, Tailwind CSS, Node.js, React Native
Graphics & Systems: OpenGL, GLSL, Assimp, GLFW, Modern C++
Databases: SQL, PostgreSQL, MongoDB
Tools: Figma, VsCode, Jira, Git