Omar Espinoza

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EDUCATION

University of California, Los Angeles — **Los Angeles, CA**

Bachelor of Arts, Linguistics and Computer Science, Class of 2024 — September 2020 - August 2024

- **Awards:** Dean's honor list (Winter and Spring quarter 2022), Seal of Biliteracy
- **Relevant Coursework:** Computer Organization, Software Construction, Algorithms and Complexity, Discrete Structures, Computer Languages, and Computational Linguistics

EXPERIENCE

Experior Laboratories — **Oxnard, CA**

Software Engineer Intern — July 2023 - September 2023

- Transformed the company's approach to programming and data management, leading to more efficient and streamlined processes by integrating dynamic link libraries into LabVIEW, introducing more efficient coding structures without overhauling the traditional LabVIEW setup – greatly enhancing flexibility, improving code reusability, and optimizing hardware communication
- Designed and implemented an automated database system using SQLite, streamlining data interactions, minimizing manual intervention, and boosting team productivity

PROJECTS

Instrument Communication Suite (ICS) *C, C++, VISA*

- Engineered a dynamic link library to bridge communication between VISA-compliant instruments and software platforms, particularly LabVIEW
- Developed functionalities enabling the retrieval and storage of instrument readings into an SQLite database
- Ensured adaptability by designing the system to validate custom SQLite database paths and guarantee directory existence recursively
- Streamlined the process of instrument reading retrieval, providing options for raw data or voltage-to-pressure converted readings

AutoDB: Automated Database Manager *C, C++, SQL*

- Integrated an automatic SQLite database system into the LabVIEW environment
- Elevated data management practices by automating the storage of readings with related metadata, such as timestamps, channel details, and configuration data
- Enhanced system reliability by introducing constants and global variables to manage constraints and dynamic information, respectively
- Simplified the process for users by creating functions ranging from directory management to reading storage and retrieval

BeanPod: Student-Centric Messaging Platform *React, Firebase, Git*

- Developed as a software construction course group project, BeanPod is a prototype of a private messaging app tailored for student communication needs
- UI/UX Design: created a dynamic and responsive user interface using React, featuring chat windows and notification pop-ups for an enhanced user experience
- Backend Development: Utilized Firebase for real-time database management, enabling instant message syncing and secure user authentication with Google sign-in integration
- Version Control: Managed codebase evolution and team collaboration using Git, ensuring smooth development and maintenance of the project
- Key Features: Streamlined Google Authentication, enabled real-time chat functionality, image sharing capabilities, and a comprehensive chat history feature, all powered by Firebase, and introduced a user-friendly dark mode toggle

ORGANIZATIONS & AFFILIATIONS

Society of LatinX Engineers

- Contributed as a member of the web development team, collaborating on website enhancements and updates

SKILLS

- **Coding Languages:** C/C++, Python, Java, JavaScript, React.JS, SQL, React, MongoDB, Git, Bash, Excel Macro, HTML/CSS, Lisp, Ocaml, Rust, Prolog, Haskell
- **Tools:** Excel, Canva, Adobe Photoshop, Adobe XD, Firebase, Google Cloud
- **Fluency:** English, Spanish