

JORGE A. RIVERA LIZARRALDE

San Diego, CA 92122 | 619-756-2381 | jordirivliz@gmail.com | www.linkedin.com/in/jorge-rivera-lizarralde

SOFTWARE TEST ENGINEER

Experienced multilingual Software Test Engineer skilled in ensuring robustness and reliability of software solutions. Expertise in comprehensive test plan design, security protocol validation, and automated testing. Proficient in C, C++, Java, and Python, with a strong aptitude for troubleshooting and proactive issue resolution. A collaborative team player adept at fostering stakeholders' satisfaction of software solutions and promoting quality throughout the entire software development cycle.

KEY SKILLS

Programming & Coding | Testing & Debugging | Embedded Device Testing | MTP and OEM device testing | Object-Oriented Design | Hardware Testing | Automation | CI/CD | Wireless Technology (5G, LTE, Bluetooth)

LANGUAGES:

English (Proficiency) | **Spanish** (Native Proficiency) | **French** (Intermediate) | **Chinese** (Beginner)

TECHNOLOGIES:

Embedded Systems | AOSP | OS and RTOS | Python | PowerShell Scripting | Java | C/C++ | Swift | JavaScript | Perl | Bash | ADB | Unix/Linux Programming | Pytest | Testrail | Jira | JTAG | PCAT | Selenium

EXPERIENCE

HCL Tech, Redmond, WA, Remote

January 2024–April 2024

Software Testing Engineer at Meta Reality Labs

- Led Quality Assurance Initiatives for Meta's Cutting-edge Smart Glasses Technologies, ensuring rigorous testing of core AR/VR functionality, including AI, WIFI (5G and LTE), and Bluetooth features.
- Achieved 95% code coverage through manual and automated testing, including regression testing, usability testing, unit testing, and performance testing employing ADB, Test Frameworks and Bug Tracking systems.
- Facilitated substantial improvements in Meta Smart Glasses' user interface and functionality across English, French, and Spanish languages with a focus on iOS and Android operating system.
- Implemented Python automation scripts to streamline testing processes and improve efficiency in detecting and debugging software issues, including thorough testing of hardware and firmware components.
- Automated the provisioning and management of test environments using Pytest, enabling efficient and scalable testing of AR/VR features in Meta Smart Glasses.

Qualcomm Inc, San Diego, CA

February 2022–December 2023

Security Software Test Engineer

- Collaborated within QST group to test QTI security solutions on Qualcomm chipsets, ensuring robustness and reliability of wireless and power features employing protocols such as Widevine, HDCP, and WFD.
- Conducted functional, performance and integration testing for embedded system products, with a focus on Android MTP and OEM devices, utilizing ADB, PCAT, and JTAG technologies for debugging and log analysis.
- Designed comprehensive test plans to validate security protocols and algorithms on Linux platforms, identifying potential vulnerabilities in Secure Content and Bluetooth features.
- Enhanced software quality by developing API and system-level test frameworks using C and C++, in conjunction with the Android Open-Source Project (AOSP).
- Automated tests using Python scripts, reducing manual effort, and improving efficiency by 45%.
- Conducted test execution, troubleshooting, triaging, and problem resolution on embedded software platforms to identify and resolve issues of firmware components (Bootloader, Kernel, and Device Drivers)
- Collaborated with developers, system engineers, and testers in a team environment to achieve project objectives effectively by providing regular reports and updates on security status to management.

iD Tech, Campbell, California
Computer Science Instructor**June 2021–September 2021**

- Delivered high-quality, individualized instruction in programming languages including Java, C++, and Python to diverse clients, fostering their understanding and proficiency in coding principles.
- Ensured clients had required software and hardware for lessons, proactively addressing technical issues and optimizing learning experience.
- Provided seamless video conference support, promptly connecting with clients at scheduled times, and addressing their questions or concerns effectively.
- Successfully facilitated interactive coding projects in Replit, a collaborative integrated development environment, encouraging students to work and apply their knowledge to real-world scenarios.

Mercury Trade Finance Solutions (TFS), Madrid, Spain
System Tester Intern**June 2018–August 2018**

- Identified and diagnosed bugs and malfunctions in portal system, ensuring delivery of a high-quality software product by collaborating with testing team.
- Conducted in-depth analysis and debugging of potential issues causing misbehaviors in system, effectively pinpointing root causes and providing valuable insights to development team.
- Prepared comprehensive bug reports, documenting identified issues, their impact, and steps to replicate them, contributing to a smooth communication process with programmers.

PERSONAL PROJECTS**Cryptosystems written in Python–Cybersecurity**

- Implemented various cryptosystems in Python, including Caesar Shift, Vigènere, RSA, Diffie-Hellman, Elliptic Curves, Digital Signatures, Lenstra's Elliptic Curve, Miller-Rabin, El Gamal, and Merkle-Hellman Knapsack.
- Demonstrated knowledge and practical application of cryptographic algorithms to secure data and familiarized with Blockchain and Web3.

iOS Application

- Developed a comprehensive Swift-based iOS application that offers users a curated selection of travel destinations along with useful tips for their trips.
 - Utilized SF Symbols and multiple tabs for organized information presentation.
 - Designed an intuitive user interface (UI) to enhance user experience (UX) during navigation and interaction.

Huffman Tree Encode/Decode

- Implemented a complete C++ program for compression and decompression of both small and large files using Huffman encoding technique.
 - Utilized Huffman's algorithm to efficiently encode and decode strings of information.
 - Generated binary files to optimize memory usage and achieve effective data compression.

Particles Simulation

- Created a dynamic board with thousands of freely moving particles using C++ and STL Libraries.
- Programmed particles to provide visually engaging effects for observers, including realistic movement and collisions.

EDUCATION**Bachelor of Science (B.S.) in Mathematics-Computer Science (MA30)****Minor in Business Management (M074) (Fall 2021)**

University of California, San Diego (Fall 2021)

San Diego, CA

Cumulative GPA: 3.644/4.0