

# Jason (Cheng) Liang (Permanent Resident)

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## Objective

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Dynamic and results-driven software engineer with 4 years of experience and deep expertise in React and Redux for building scalable, high-performance frontend applications, along with proven proficiency in designing robust RESTful APIs using Node.js and Express. Adept at driving quality through comprehensive UI and API automation testing utilizing Playwright, Cypress, and Pytest. Passionate about leveraging full-stack development and advanced automation skills to deliver exceptional software solutions and accelerate continuous improvement in testing strategies and product reliability.

## Skills

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**Programming Languages:** Proficient in Python, PHP, JavaScript (including React.js), HTML, and CSS

**Frameworks and Tools:** Experienced with **React** and **Redux** for frontend development; backend frameworks including Node.js **with Express, Flask, Laravel**

**Software Testing:** Proficient in various software testing methodologies including black-box testing, white-box testing, integration testing, regression testing, and user acceptance testing.

**Automation Testing:** Experienced in UI automation (Playwright, Cypress) and API automation (Pytest), with a focus on building scalable, maintainable test suites.

**Source control:** Skilled in using Git-based version control systems including GitLab and GitHub for efficient collaboration and code management, including setting up CI/CD pipelines using GitHub Actions to automate testing and deployment.

**Databases:** Hands-on experience with both NoSQL databases (MongoDB) and relational databases (MySQL, PostgreSQL).

**Developing Tools:** VS code, Microsoft Office

## Working Experience

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**Software Development Engineer in Testing**

**Oct 2023 – Present**

**TIKTOK AUSTRALIA PTY LTD**

Entertainment Providers & Short Video Platform

### Tasks:

- Built a quality platform using React and Redux for state management, alongside Express.js APIs to deliver real-time test visualization and reporting, increasing transparency and accelerating issue resolution by **40%**.
- Designed and implemented a robust testing framework using Pytest and Object-Oriented principles, including polymorphism, to promote code reuse, flexibility, and scalability in test automation. This framework streamlined test creation and execution, significantly reducing script development time.
- Designed and implemented UI test automation using Playwright following the Page Object Model (POM) pattern, which reduced manual regression testing efforts by **50%** while improving test maintainability and scalability.
- Designed and executed comprehensive API automation tests with Pytest, covering positive, negative, edge, integration, performance, and security scenarios, achieving **95%** test coverage and reinforcing software reliability.
- Integrated automated tests into the **CI/CD** pipeline, ensuring tests run automatically with every

code commit and deployment, thus enhancing release reliability.

## Software Developer

Sep 2021 – Sep 2023

IMS Integrated Monitoring Systems, Maroochydore, Queensland, Australia

IT Services and IT Consulting Company

### Tasks:

- Developed and maintained PHP web applications using Laravel framework, alongside building dynamic frontend interfaces with React.js and JQuery.
- Rewrote an existing legacy frontend from scratch using React.js, improving code maintainability, performance, and user experience.
- Managed application state using Redux and created reusable custom React hooks to improve code modularity and maintainability.
- Collaborated in agile teams through daily scrum meetings, sprint planning, and coordinated bug fixes and feature development.
- Led automation initiatives, introducing automated testing that reduced manual testing time by **50%** and enhanced software quality.
- Built custom **RESTful APIs** to support seamless communication between frontend and backend systems, ensuring scalable and secure data exchange.
- Successfully resolved over **150** tickets, contributing to sustained system reliability and performance improvements.

## Education

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Master of Information Technology

Mar 2020 – Jul 2021

University of Sydney, Sydney

Bachelor of Science in Information Technology

Mar 2017 – Nov

2019 University of Technology, Sydney