

Zhenyuan(Vincent) Li

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Full-stack software engineer focused on delivering scalable, end-to-end solutions across mobile, web, and backend systems. Experienced in building microservice-based systems, RESTful APIs, and cloud-hosted applications using modern technologies including Node.js, TypeScript, and AWS. Proven ability to improve system reliability, reduce production issues, and deliver user-focused features in agile environments. Interested in exploring emerging technologies such as AI and large language models to enhance software capabilities and user experience.

SKILLS

• Front-end:

React 19, Next.js, Angular, React Native, Ionic (Capacitor), jQuery, HTML5, CSS3, Tailwind CSS, shadcn/ui, TanStack Query, React Hook Form, RxJS, Storybook, Vitest, Jest, React Testing Library, Playwright, Cypress

• Back-end & APIs:

Node.js, TypeScript, Express, NestJS, ASP.NET Core (.NET 8), PHP (Symfony, Slim), REST APIs, GraphQL, OpenAPI (Swagger), Authentication (JWT, OAuth2, OIDC), API Gateway Design

• Data & Storage:

PostgreSQL, MySQL, Oracle, DynamoDB, MongoDB, Redis, Firebase, Prisma, Drizzle ORM, TypeORM, Mongoose

• Cloud & Infrastructure

AWS Lambda, API Gateway, CloudFront, S3, DynamoDB, ECS Fargate, Route 53, ACM, ALB, Aurora PostgreSQL, EventBridge, SQS, IAM, CDK (Infrastructure as Code), Amazon Bedrock

• DevOps & Platform Engineering

Docker, GitHub Actions, Jenkins, Terraform, AWS CDK, Bitbucket Pipelines, CI/CD, pnpm Workspaces, Turborepo, Monorepo Architecture

• Architecture

Microservices, Serverless Architecture, Event-driven Architecture, Domain-driven Design (DDD), Feature-based Architecture, REST API Design, Scalable Systems, Distributed Systems, Caching Strategies

• AI & Agentic Development

LLMs, OpenAI API, Anthropic Claude, Amazon Bedrock, LangChain, Retrieval-Augmented Generation (RAG), Prompt Engineering, AI SDK, MCP (Model Context Protocol), Function Calling, Agentic Workflows, AI-assisted Development

WORK EXPERIENCE

Senior Software Engineer

Sep 2025 – Present

The University of Queensland, St Lucia, Brisbane

- Contribute to the design, development, and maintenance of enterprise learning platform integrations (Blackboard) and other university digital platforms, supporting teaching and learning systems used by staff and students across the university.
- Develop and maintain full-stack enterprise applications, microservices, and integrations using TypeScript, React, Node.js, and C# / ASP.NET Core across large-scale university digital platforms.
- Design and support event-driven microservices and messaging-based integrations for Blackboard and related enterprise systems, enabling reliable asynchronous communication between distributed services.
- Take ownership of multiple internal services and features, ensuring their reliability, scalability, and alignment with evolving academic and operational needs.
- Maintain containerised microservices on AWS ECS Fargate, leveraging Route 53, ALB, ACM, and S3 for scalable infrastructure and secure domain management.

- Monitor and optimise application performance, logging pipelines, and retention strategies to improve system stability and cost efficiency.
- Develop unit, integration, and end-to-end (E2E) tests to strengthen service reliability, reduce regressions, and ensure high code quality in CI/CD workflows.
- Collaborate with cross-functional stakeholders including product owners, and infrastructure teams in an agile delivery environment to continuously improve student and staff digital experiences.

Software Developer

Jun 2023 – Aug 2025

Simpro Corporate Pty Ltd, Eight Mile Plains, Brisbane

- Built cross-platform mobile applications using Ionic and Angular, used daily by thousands of technicians to streamline job workflows.
- Created and optimized RESTful APIs using PHP Slim, enabling faster and more reliable data synchronization across mobile and web clients.
- Actively participated in fixing customer-reported bugs, focusing on high-priority (P1) issues to maintain application stability.
- Wrote comprehensive unit and end-to-end (E2E) tests, increasing test coverage and reducing regression incidents in each release cycle.
- Refactored legacy code to improve maintainability and performance, leading to faster app load times and reduced memory usage on older devices.
- Participated in agile ceremonies and peer code reviews, contributing to shorter delivery cycles and improved team collaboration.
- Designed and developed proof-of-concept agentic AI solutions leveraging LLMs, prompt orchestration, and retrieval-augmented generation (RAG) techniques to automate technician workflows and improve contextual task assistance.
- Integrated modern AI frameworks (LangChain, ai sdk) into mobile and backend applications, building reusable integration patterns for LLM-powered features, contextual data retrieval, and intelligent workflow enhancement.

Achievements

- Received the “Simpro Dev Choice Award” twice, in October 2023 and March 2024, for contributions to the Engineering Department.
- Two-time 1st Place winner at the Simpro Hackathon (2024 & 2025) with AI/ML-focused projects (e.g. “Tech Fusion Challenge”), showcasing innovative technology integration.

Junior Full Stack Engineer

Jan 2023 – Apr 2023

Orange Digital, Fortitude Valley, Brisbane

- Collaborated with other developers and designers to build and maintain web applications using TypeScript, React, Next.js
- Built user interfaces and features for a cross-platform mobile application using React Native, Redux.
- Developed and maintained backend CMS(Strapi, WordPress), integrating with third-party services such as Stripe, SendGrid
- Participate in code reviews, pair programming, and other collaborative development practices to ensure high-quality code and knowledge sharing.
- Implemented reusable components and libraries for future use and to maintain consistency across different projects.

EDUCATION

• University of Queensland		03/2019 – 12/2021
Master of Information Technology	GPA: 6.25 / 7	
• Changchun University of Science and Technology		09/2014 – 06/2018
Bachelor of Economics (Financial Engineering)	GPA: 3.32 / 4	

Achievements

- Dean's Commendation for Academic Excellence **02/2019 - 06/2019**
- Third Class Scholarship (in five semesters) **09/2015 - 03/2018**
- Jilin Province College Students Innovation and Entrepreneurship Training Program **11/2017 - 11/2018**

CERTIFICATIONS

- **AWS Certified DevOps Engineer – Professional**

January 4, 2026 - January 4, 2029

Validation Number: df74662b589d4034a790b1865ac74e73

- **AWS Certified Machine Learning – Specialty**

July 22, 2024 - July 22, 2027

Validation Number: 0f55c3e10d054ed4a09afc1c7099c960

- **Machine Learning Specialization (2024)**

[Validation Link](#)

- **Deep Learning Specialization (2021)**

[Validation Link](#)

PROJECTS

zl-jspg

<https://dolphin-app-kpjiv.ondigitalocean.app/> [NPM](#) [Repo](#)

zl-jspg(ZL's JS Code Playground) is a lightweight in-browser code editor for markdown and JavaScript. It is just like a JavaScript version of Jupyter notebook and is perfect for practising interview questions.

Mar 2022

- Developed front-end with React(ts), Redux and back-end with Express(ts) as sole full-stack developer.
- Implemented code editor (js/jsx/css) with Monaco-editor and bundled user input code using esbuild.
- Implemented a text editor that supports editing and previewing Markdown files.
- Created customized plugins to store cache on IndexedDB and fetch third-party packages from unpkg.
- Engineered back-end API by loading the CLI, starting the server, loading and saving code locally etc.
- Successfully deployed the Monorepos (managed by Lerna) to NPM and a demo version to AWS S3.

Health Hero

[Demo Video](#) [Repo: Front-end & Back-end](#)

A cross-platform mobile application that generates weekly meal plans, analyses users' eating habits and summarizes nutritional reports. It aims to increase the initiative of young people to eat healthily.

Nov 2021

- Led an Agile team of 6 with 3 frontend, 2 backend and 1 UI/UX designer and worked as a full-stack developer. Decided front-end with Flutter (Dart), TensorFlow Lite; Back-end with Express and MongoDB.
- Defined front-end project architecture, including arranging major screens, global app state structure (using Provider), establishing connection with back-end RESTful API.
- Implemented meal segment recognition feature using offline pre-trained deep learning model.
- Held different Scrum meetings on a regular basis and constructed weekly study plans for team members who are new to mobile development.
- Tested major backend routes using Mocha & Chai and set up CI/CD pipeline for the server.
- Successfully deployed backend to Heroku and ran the frontend on both iOS and Android devices.

Broomer

<https://broomer-ec9zy.ondigitalocean.app/> [Repo](#)

A single-page web application which helps clients book the nearest and most convenient house cleaning services.

Also, provide cleaners with a platform to accept order and earn money.

Mar 2020

- Worked as one of 3 frontend developers in a team of 6. Developed front-end with React, Material-UI
- Assisted tech leader in constructing the initial front-end structure.
- Constantly liaised with UI/UX designers about the user testing and implementation details to improve the application's utility.
- Implemented the 'client' (who needed cleaning services) section interfaces, including displaying activity data on the dashboard, account profile & setting, order management etc.
- Created Routes Guard to improve security and prevent unauthenticated users step into the wrong place.
- Successfully deployed to AWS S3 with CloudFront.