Jacob Zwang

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Venice, Los Angeles, California

Full-stack web application engineer with 4 years of programming experience and 10 years of experience in design via hard surface 3d modeling, 3d animation, and vector graphics. Passionate about combining my cross disciplinary skill set and finding elegant solutions to complex design and engineering problems.

Key Skills

- Svelte, Solid, Vue, React, TypeScript, HTML, CSS, Canvas, REST, OpenAPI, GraphQL, and other web tech.
- Mongo, PostgreSQL, Redis, ORMs, and other database tech.
- Rust, Go, C, Java, Linux, Bash, and other systems programming tech.
- 3d modeling and animation in Blender. 2d graphics in Adobe tools.
- Innovating and adding value in unexpected places.
- Unifying ideas and creating consistent design systems.

Work Experience

Senior Full Stack Engineer - Conversational Engineering

Apple (Consultant via Advantis Global) / Nov 2022 - Present
- Designed and developed POC chatbot platform and carried multiple resulting works to production at scale.
- Architected codebase to replace over 5 years of previous frontend and backend development.
- Designed iMessage inspired design language for Apple's internal chatbot configuration platform.
- Built graph editor for configuring complex data driven customer experiences for chatbots in SolidJS.
- Architected and released GraphQL platform enabling business users to leverage complex data in chatbots.
- Designed, developed, and released tools for creating and managing financial forms in chatbots.
- Worked with stakeholders to ensure design and engineering efforts met business needs.
- Designed and developed Apple-style SolidJS component library.
- Deeply integrated machine learning into our next generation chatbot configuration platform using Python.
- Helped bridge the gap between platform and machine learning teams.
- Introduced new projects and opportunities to our team.
- Built testing pipeline in playwright and worked with QE and QA teams for additional testing.

Lead Developer

Fitty Labs / Jun 2022 - Jan 2023
- Lead conversion of ReactJS codebase to SvelteKit (at founders request).
- Built real-time Web Socket infrastructure using Cloudflare Durable Objects.
- Built Miniflare proxy for SvelteKit to achieve full stack hot module reload.
- Built storage model using TypeScript, Cloudflare KV, and Cloudflare Durable Objects.
- Contributed to sprint planning and time estimates.
- Lead UI/UX redesign to prioritize shape, color, and animation over text and icons for viewing at a distance.
- Built custom animations and transitions in SvelteJS for powerful visual cues.

Product Architect, Co-Founder

Backyard Events / May 2021 - Feb 2023
- Designed UI in Figma and refined throughout development.
- Lead development of web user interface in SvelteJS and established front-end architecture.
- Built development environment including PostgreSQL, NodeJS, and Redis in Docker Compose.
- Built REST API endpoints using TypeScript.
- Setup automated testing in Cypress.
- Contributed to CI/CD in Github Actions, AWS CodePipeline, and Husky.

ThreeJS Developer

Genopets / Jun 2021 - Aug 2021
- Built ThreeJS abstraction layer in JavaScript for swapping vertex buffers in and out of components.
- Built animation phase abstraction using Tween.js for blending between models.
- Built Blender to ThreeJS automation pipeline in Python.
- Optimized GLTF 3D models for the web in Blender.
- Designed, modeled, and animated example "Genopet" for artists to reference in Blender.
- Wrote documentation for creating efficient and aesthetically pleasing 3d models for the web.
- Built custom shaders in GLSL.

Full Stack Web Developer, Salesforce Automation Engineer

Alden Pacific Investments / Feb 2021 - Apr 2021
- Lead development of custom questionnaire and calendar form with Salesforce integration.
- Used Java to write automations in Salesforce.
- Set up CI/CD using Github and Google Cloud Build.
- Built Docker Compose development environment and production Docker containers.
- Mail automation using Mailgun and JavaScript.

Full Stack Web Developer

Gustav Carroll / Feb 2021 - Feb 2022
- Designed and discussed the website with the client using Figma.
- Built development pipeline CI/CD in Google Cloud.
- Built frontend UI in SvelteJS and TypeScript.

C Programming Tutor

Self Employed / Oct 2020 - Dec 2020
- Helped students succeed in an entry-level C programming class.

Personal Projects

Event Coordinator, Web Content Manager, Video Editor

Yale Open Climate / Apr 2020 - Nov 2020

Organic Cluster Communication

Personal / Apr 2020 - Present
- Built high-performance isosurface user interface in WebGPU and WGSL.
- Used WebRTC and SocketIO for real time video and audio communication.

Logo and Vector Graphics Design

Personal / Sep 2019 - Present
- Used Adobe Illustrator, Photoshop, and Indesign.

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Personal / Jun 2022 - Jun 2022
- Built chrome extension for full text searching any website using ReactJS and IndexedDB.

Hobby Architecture & Automotive Design

Personal / Aug 2016 - Present
- Created complex 3d models and scenes in Blender.
- Visited Blender foundation in Amsterdam and met with the founder.

Hobby 3d Animation

Personal / Aug 2014 - 2018