

Patrick Canfield

SOFTWARE ENGINEER | FULL-STACK DEVELOPER

Seeking a position where I bring my knowledge of software engineering, TypeScript, Python, entrepreneurship, ecetera to create products that delight users and deliver a brighter future. I enjoy cross-functional collaboration, learning new technologies, balancing trade-offs, going from zero to one, analyzing fuzzy requirements, and synthesizing solutions that are both elegant and practical.

San Francisco, CA • [\(321\) 362-8084](tel:(321)362-8084) • pscale01@gmail.com • github.com/patreeceeo • [LinkedIn](#)

RELATED SKILLS

PROGRAMMING LANGUAGES

NodeJS, JavaScript/TypeScript, React, Less/Sass, Ruby, Elixir, Python,

TOOLS/LIBRARIES/Frameworks

Playwright, Jest, Vite, Yarn, THREE.js, Unity, Godot, Linux, Ruby on Rails, Elixir/Phoenix, Python/Django, Apache, D3.js,

OTHER

Web Standards, WebGL, REST APIs, Entity-Component Systems, Data structures, Algorithms, OOP, Functional Programming, Object-Oriented Design, Agile, UX research, Rapid prototyping, Leadership, Accessibility, Entrepreneurship, Japanese,

PROJECTS

ZOMBOBAN

October 2023 — August 2024

- Using TypeScript, NodeJS, web platform, created a unique action-puzzle game that combines Chips Challenge with NPCs that interact with the environment and each other. It hasn't been officially released yet, but I've gotten positive feedback from playtesters. You can play it at the link above.
- In early development, I spiked on a prototype to validate and develop the core game mechanics before spending time on a full implementation
- Instead of writing level data by hand, which would be slow and error-prone, I created a user-friendly visual editor, reusing the input and movement gameplay code, allowing me to rapidly iterate on level designs
- Attended several play tests, watching people play my game, collecting feedback which I used to help prioritize my work
- Rolled my own ECS, drawing on an insight I had about Set theory + OOP + observables, allowing me to define easy-to-use, type-safe, serializable components and efficient queries
- Applied the command pattern to allow for infinite undo. Undo applies to all moving entities, not just the player. This saved me a lot of time debugging, as I could easily step back through the game state to see what went wrong
- Applied double dispatch pattern to simplify entity interaction, removing ~100 conditional-heavy LOC, enabling faster product iteration
- Created a fully 3D isometric environment using Blender and Mixamo, allowing for more inventive puzzle designs and a retro-poly aesthetic
- Spun up my own bare-metal server to host the game, saving money and allowing me to have full control over the deployment process

NO INTERNET

February 2024 — February 2024

- Participated in a weekend game jam in which I, along with 3 teammates, created an absurd clone of a Google Chrome easter egg. I was responsible for VFX (e.g. when the dino's head flies off), character design, collision handling, and collaborated on game design, playtesting. We ended up winning the jam.

KBDSMASH

June 2023 — June 2023

- Participated in a 1 day game jam in which I, along with 2 teammates, created a local PvP game. I was responsible for most of the programming. We finished the jam with a fun, playable game.

PROFESSIONAL EXPERIENCE

ELSEWHERE COMMUNITIES SAN FRANCISCO — SENIOR SOFTWARE ENGINEER, CONTRACT

September 2024 — Present

- Migrated a Next.js app using Supabase to one using S3 and TypeORM, increasing performance by 20% and reducing hosting costs by almost 100%, without increasing code complexity

MAPPA LABS SAN FRANCISCO — LEAD SOFTWARE ENGINEER, REMOTE CONTRACT

September 2022 — January 2023

- Utilized A* for efficient path-finding in dynamic 3D environments in TypeScript
- Fixed a bug in the engine that made physics bodies difficult to control
- Advised with regards to best practices and efficient collaboration workflows

INFINITE REALITY SAN FRANCISCO — SR. SOFTWARE ENGINEER, REMOTE CONTRACT

July 2021 — January 2022

- Designed/implemented system that transforms data from GIS services (e.g. Mapbox) into 1000s of polygons per second, recreating real city streets in 3D

during gameplay.

RALLY HEALTH SAN FRANCISCO — SR. SOFTWARE ENGINEER, FULL-TIME

October 2018 — January 2021

- Designed/implemented microservice that reduced time to first meaningful paint for benefits portal by ~15%
- Developed Pull Request status Slack bot in my spare time to make it easier for engineers to identify PRs that needed reviews
- Contributed article on long-lived HTTP connections to engineering blog
- Mentored other engineers

METROMILE SAN FRANCISCO — SOFTWARE ENGINEER, FULL-TIME

March 2016 — November 2016

- Created rapid prototyping scaffold
- Implemented “replay recent trips” feature using GIS data from onboard telemetry devices
- Created reusable components that improve perceived page load time

CONSTANT CONTACT SAN FRANCISCO — SOFTWARE ENGINEER, FULL-TIME

March 2013 — March 2014

- Created reusable calendar component which set new standard for JavaScript code quality within the company
- Was instrumental in the effort to incorporate automated testing of frontend code into CI/CD
- Assigned to a two-person team that served as standard bearers for frontend code within the company

EVENTRAY SAN FRANCISCO / SANTIAGO, CL — COFOUNDER, SOFTWARE ENGINEER, FULL-TIME

March 2012 — January 2018

- Created presentation which helped us get selected by Chile's Y-Combinator.
- Designed & implemented logic-enabled WYSIWYG form builder
- Note: We took a Hiatus for a few years after StartUp Chile while I worked at Constant Contact, Metromile

EDUCATION

UNIVERSITY OF NORTH FLORIDA BACHELOR OF SCIENCE IN COMPUTER SCIENCE

May 2009

University Honors