

Education

Massachusetts Institute of Technology, Computer Science

Sep 2018 — Jun 2022

Experience

Software Engineer II (TypeScript, Angular, C#, .NET, Entity Core, SQL, Azure, REST, Nx Workspaces) **Jul 2023 — Aug 2025**
Patterson - Fuse remote

- Developed and maintained a form-building microservice using **Nx workspaces**, **modern Angular**, and **C#, .NET, Azure**
- Lead engineer in **AngularJS→Angular migration** for my team; pioneered best practices through hands-on implementation and collaboration with other teams; improved bundle performance and code maintainability
- Authored comprehensive, high-quality migration documentation that **reduced the setup time for new contributors**
- Delivered multiple complex Angular pages ahead of schedule, accelerating feature delivery and reducing backlog
- Served as **accessibility** and **component testing** lead; completed a formal accessibility course and applied **WCAG** best practices to new and existing Angular components, improving accessibility, enhancing keyboard navigation and overall usability
- Discovered and fixed SQL injection vulnerabilities, removing critical security risks

Software Engineer (React, Typescript, GraphQL, Python, Django, PostgreSQL, Docker, RTL, Poetry) **Jul 2022 — Jun 2023**
Vividly remote

- Modernized legacy stack by introducing Django, GraphQL, and TypeScript React, achieving 10× faster load times and improved developer safety
- Migrated and cleansed >1 TB of customer data from Firebase to PostgreSQL using custom ETL pipelines, yielding faster queries and stronger consistency
- Designed and implemented an **end-to-end encryption** system for a data scraping tool in **Python** and **TypeScript**, securing sensitive customer information and meeting compliance requirements
- Enhanced deductions and reconciliation management workflows by integrating a new API that allowed users to scan and validate invoices, improving accuracy and reducing manual review
- Built comprehensive test suites—including frontend unit tests (**React Testing Library**), GraphQL **integration tests**, and backend tests using **PyTest** and **Poetry**—ensuring system reliability and faster development cycles

Software Engineering Intern (React, Python, Javascript, Firebase) **Jun 2021 — Aug 2021**
Cresicor (now Vividly) remote

- Built a Chrome extension to upload email attachments directly to user accounts
- Migrated GitHub Actions to self-hosted **GCP** runners, cutting CI costs by 50%
- Piloted preview-site CI workflow for PRs, shortening QA feedback cycles with preview sites for every PR
- Completed front end (**React**) and back end (**Python**) tasks to add features, make improvements, and fix bugs

Solo Projects

Extended Markdown Editor (Nuxt, Vue, OAuth, SSR, Tailwind, SQLite, Typescript, REST, CI/CD) [GitHub](#)

- Built SSR Nuxt markdown editor with Google OAuth and SQLite autosave
- **SEO**-friendly server-rendered pages with auto-generated outline to improve discoverability
- Enforced **CI/CD** gated by unit tests and linter to ensure safe deploys
- Implemented a custom $O(n)$ markdown parser supporting tabs, accordions, icons, and inline code components
- Go compiled to WebAssembly for faster syntax highlighting

Collaborative Sudoku (Angular (zoneless), TypeScript, Rust, Node, Firebase, Playwright, Tailwind, IndexedDB, CI/CD) [GitHub](#)

- Added **collaborative mode** with real-time puzzle updates and chat using **event-driven architecture** and **optimistic updates**; ensured **eventual consistency** with **Playwright** end-to-end tests simulating concurrent multi-user interactions
- Built **Rust** puzzle generator with **unit tests** and **Node** API to publish puzzles to **Firebase**
- Implemented Angular client with offline persistence (IndexedDB) and CI/CD via GitHub Actions

Mortgage and Rent Retirement Calculator (Vue, Typescript, Tailwind, Pinia) [GitHub](#)

- Implemented responsive buy-vs-rent retirement calculator (Vue + TypeScript) with reactive charts and light/dark support
- Designed UX to clarify tradeoffs and surface actionable retirement outcomes for users

Kendo CSS Cheatsheet (Next.js, React, TypeScript, Tailwind, Vercel, SSG, SEO) [GitHub](#)

- Created a searchable cheatsheet for Kendo CSS utilities using **Next.js SSG** and **Fuse.js fuzzy search**, improving accessibility and efficiency for developers. The site is **SEO** friendly, fully **accessible**, **mobile-friendly**, and supports light and dark modes.