David Lee

Staff Software Engineer / Engineering Lead

✉ jobs.lee.david.cs@gmail.com   in linkedin.com/in/leedavidcs

github.com/leedavidcs   </> makepurple.com/leedavidcs

SUMMARY

Full Stack Engineer with extensive experience in start-ups, serving various key roles in software development.

Advanced expertise in TypeScript and Node.js with React and GraphQL.

Demonstrated skill in architecting greenfield applications, researching emerging technologies, improving the developer experience, and working in distributed teams.

Enjoyer of React + Cloudflare Workers. 🚀

SKILLS

Languages

TypeScript, JavaScript

Frameworks

Next.js, Remix, Nest.js

Frontend

HTML5, CSS3, React, Urql, Apollo Client, Tailwind CSS, Styled-Components, Visx, D3, Recharts, Framer Motion, Storybook, React-Three-Fiber, React-Window, Radix, Headless UI, Reakit, Redux, Slate, Prism

Backend

Node.js, Serverless, Cloudflare Workers, D1, Postgres, MongoDB, Drizzle, Prisma, Redis, GraphQL, Apollo Server, Nexus, Hono, Express, Socket.io, tRPC, Lucia, NextAuth
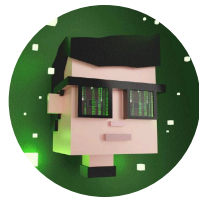
Tooling + Services

Linux, Mac, Git, VSCode, Figma, Zeplin, SourceTree, Webpack, pnpm workspaces, GraphQL-Codegen, GitHub Actions, AWS, Cloudflare, Vercel, Netlify, Pulumi, CDKTF, Terraform, Turborepo, Docker, Amplitude, Google Analytics, Algolia, Sentry, Notion, Segment, Upstash, Postmark, Cloudinary, Changesets, Playwright, Cypress, Jest, Octokit, Stellate, Stripe, Twilio, Chromatic

Concepts + Misc.

SEO, A11y, I18n, SSR, CSR, ISR, SSG, PPR, Atomic Design, Image Optimization, JWT, Authorization, Lighthouse, Code-splitting, Lazy Loading, PubSub, DB Normalization, DB Sharding, Caching, GraphQL APQ, N+1, Rate Limiting, IP Blacklisting, CRDTs, Windowing, Concurrency, Monorepos

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PROFESSIONAL EXPERIENCE

KarmaSuite

Staff Engineer / Engineering Lead

Mar 2023 - Present

▸ Architected and built the bulk of the initial KarmaSuite application as the 1st engineer (using Next.js, Turborepo, Tailwind CSS, tRPC, prisma, and Storybook), including an atomic design system with Radix UI.

▸ Unified and integrated 3rd party accounting APIs (e.g. QuickBooks, NetSuite, etc.) to ETL pipelines so that data can be written to and from KarmaSuite.

▸ Denormalized database tables to support more performant bulk reads and writes of thousands of data rows in crons and long-lived background tasks.

▸ Invented a highly performant algorithm to allocate tens of thousands of expenses to restricted funding sources that minimizes wasted dollars for non-profits using partitioning, set theory and hot-swappable heuristics for an A* algorithm.

▸ Created and reviewed numerous PRDs, RFCs and TADs for the engineering org.

@pluv/io

Open Source (npm)

Aug 2022 - Present

▸ Built real-time, typesafe packages for multiple runtimes (Node.js and Cloudflare Workers) and frontend frameworks (e.g. react), supporting authentication, rooms, custom events, awareness + presence and CRDT storage (with yjs and loro-crdt).

▸ Configured git and npm management with Commitizen, Changeset, Renovate, Kodiak and GitHub Actions.

▸ Added E2E tests with Playwright, simulating runs on singular and distributed Node.js servers and Cloudflare Worker durable objects.

▸ Currently building an automated multi-project deployment PaaS as a GitHub app using Next.js, CDKTF/Terraform, AWS (ECR, Lambda), Cloudflare (Pages, Workers, D1, Durable Objects), and QStash.

▸ Migrated both doc and PaaS sites from Next.js pages directory to the app router.

Openbase (shut-down)

Staff Frontend Engineer

Apr 2021 - Feb 2023

▸ Proposed then executed a gradual migration strategy to port the frontend from a SPA-Parcel app to Next.js, Apollo, Styled-Components, Storybook and Codegen.

▸ Improved web vitals, a11y and SEO to boost Lighthouse scores from <20 to >90.

▸ Architected the frontend application and implemented many features with Next.js, Apollo, Styled-Components, Storybook, Codegen and Tailwind CSS.

▸ Created an Algolia-Apollo interoperability module to power Openbase's search, that populated @apollo/client's normalized cache, compatible with Next.js SSR.

▸ Authored an a/b + split-testing framework that integrated with Google Analytics and Amplitude that segmented users by percentage or special conditions.

▸ Created serverless functions to reroute traffic from old sites and generate custom README badges with metrics from Openbase for package maintainers.

▸ Significantly improved complex data-grid performances through windowing and minimizing re-renders via memoization and careful opt-outs of state updates.

BS in Computer Science

University of California, San Diego

📅 Graduated: June 2017

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PROFESSIONAL EXPERIENCE (CONTINUED)

📅 MakePurple
Website Project
Sep 2021 - Apr 2022

- ▸ Built with Next.js, NextAuth, Prisma, Nexus, Apollo Server, TailwindCSS, Urql, Storybook, PlanetScale, Upstash, Octokit, Pnpm workspaces and Turborepo.
- ▸ Authored an internal CSS-in-JS library for emails in React, a rich text editor with Slate, heat-maps with Visx, a type-safe GraphQL client for Octokit, and more.
- ▸ Improved accessibility with support for screen-readers and keyboard navigation with Radix and Headless UI.
- ▸ Implemented GraphQL for: activity feeds, GitHub operations, file uploads, friend suggestions, real-time chat, notifications, and comments with Nexus + Prisma.

📅 Toastel (shut-down)
Senior Full Stack Engineer
Jan 2020 - Mar 2021

- ▸ Designed in Figma, and created an atomic design system without using any ui-toolkits, while improving accessibility and minimizing client bundle size.
- ▸ Authored an internal charting library with Visx, a data-grid library with React-Window, responsive emails with Mjml, animations with Framer-Motion, and more.
- ▸ Created several GraphQL-Nexus plugins to rate-limit fields, validate inputs, and prevent malicious queries with complexity and depth limits.
- ▸ Coded over 300 components and 400 stories on Storybook, with snapshot tests.
- ▸ Achieved 95-100 on all Google Lighthouse metrics (excluding PWA).
- ▸ Implemented JWTs with refresh-tokens, blacklists and retries with Redis + Apollo.
- ▸ Implemented GraphQL for: full-text search with Algolia, emails with Nodemailer, subscriptions and payouts with Stripe, presigned URL uploads with S3, localized timezones with Google Maps, and CRUD with Nexus + Prisma.

📅 Onfleet
Senior Full Stack Engineer
Jan 2019 - Jan 2020

- ▸ Migrated the AngularJS + ES5 frontend to React, Styled-Components and TypeScript with snapshot testing through Jest + Storybook.
- ▸ Proposed then directed the migration of the CoffeeScript + Restify backend monolith to TypeScript, Apollo Server and Serverless-Http that would allow for incremental adoption for frontend and mobile teams.
- ▸ Rewrote both the Stripe billing and the Twilio voice and SMS proxying services to support more features, be more declarative and be more testable.

📅 Outward (acquired by Williams Sonoma)
Senior Software Engineer
Jan 2018 - Jan 2019

- ▸ Implemented a monogramming app that used WebGL to enable customers to apply custom texts and images as textures over 3d meshes using React, TypeScript, JSS, Apollo, GraphQL, Pixi.js and Babylon.js.
- ▸ Mentored junior engineers; drove requirements and timelines with managers; interfaced with clients to guide integration; and facilitated meetings with QA, graphics and the infra teams to coordinate successful releases and milestones.
- ▸ Built a REST api with authentication (with Koa.js, Mongoose and Passport.js) to power Bassett Furniture's new store site (React, Redux Observable and JSS).
- ▸ Authored a library to bridge a legacy ES5 app to React, and set-up a CI/CD pipeline using TravisCI, SonarQube, Jest and ESLint.

📅 Bosera Funds & Newport Asia
Software Engineer
Jun 2015 - Dec 2017