Prajwal Murthy

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WORK EXPERIENCE

Fullstack Engineer — **Jun 2024 – Dec 2024**
Supplyframe — *Pasadena, California*

- Spearheaded platform security enhancements, mitigating XSS and IDOR vulnerabilities using Burp Suite for automated detection and patching, resulting in a 40% reduction in security incidents.
- Engineered real-time messaging infrastructure by architecting Socket.io and Redis pub/sub systems, which now supports 1000+ concurrent users with sub-100ms latency, increasing user engagement by 45% and reducing server costs by 50%.
- Created a scalable UI component library with 30+ reusable components, achieving 95% test coverage and reducing design inconsistencies by 30%.
- Improved REST API performance by refactoring SQL queries, utilizing parameterized queries, implementing proper indexing and optimizing join conditions, resulting in a 6x improvement in API response time.

Frontend Engineer (Mid Level) — **Mar 2022 – Nov 2022**
Certa.ai — *Remote*

- Enhanced key features of an enterprise third-party risk platform for clients like Walmart and Tesla etc., and engineered a workflow system handling 10,000+ nodes at 60fps, decreasing onboarding time by 70%.
- Boosted workflow creation efficiency by 95% through innovation in JSON configuration optimization utilizing JavaScript Proxy patterns, and developed an efficient automated unused attribute detection system reducing config processing time by 50%.
- Developed and maintained a library of 40+ reusable React/TypeScript UI components achieving 95% test coverage, accelerating product development and shortening development time by 70% across 3 product teams.

Software Engineer — **Aug 2019 – Mar 2022**
Snapwiz Inc — *Remote*

- Improved student engagement by 35%, enhancing platform performance for 30M+ students across 10,000 institutions, by implementing React.Suspense and code splitting which reduced bundle size by 40%.
- Enabled real-time student assessments by spearheading database optimization initiatives that impacted 1M+ daily active users, and architecting a MongoDB schema redesign, resulting in an 80% reduction in query response time.
- Led product growth by guiding end-to-end development of core platform features driving 200% YoY revenue growth, directing 3 engineers, managing AWS infrastructure achieving 99.9% uptime and earning Employee of the Year award.
- Boosted subscription growth and user experience by launching a service for 5M+ premium users, designing a payment infrastructure using Node.js/Redis that resulted in a 35% increase in subscription renewals.

PROJECTS

ThoughtFabric.ai *Visual AI Workflow macOS Application* | *Link* | *Tauri 2.0, Rust, Next.js, TypeScript, SurrealDB*

- Engineered a 100% secure, high-performance visual AI workflow macOS application using Rust, Tauri 2.0 and Next.js for the UI, that empowers users to create and connect AI nodes in a visual canvas, and achieving over 1000+ downloads within its first week that resulted in a 15% reduction in their time to arrive at actionable insights.
- Implemented a sub 100 ms data pathway by optimizing SurrealDB, also incorporating prompt caching and API throttling leading to a reduction in OpenAI costs by 40%, boosting overall user productivity by 20% measured via internal surveys, and resulting in over 200+ active monthly users.

Smart Homes Platform | *Link* | *React, TypeScript, Java Servlets, MySQL, MongoDB, ElasticSearch, Vector Embeddings*

- Built a scalable, full-stack e-commerce platform, employing Java microservices with a REST API, ElasticSearch with OpenAI embeddings for real-time semantic search, MySQL for OLTP, and MongoDB for unstructured data. This architecture is optimized to handle 10k+ concurrent users with efficient caching system to keep response times under 0.1s for key endpoints.

SKILLS

Programming Languages: TypeScript, JavaScript (ES6+), Python, Rust, Java, C++
Frontend Engineering: React, Next.js, HTML, CSS (SASS/SCSS), Tailwind CSS
Backend Engineering: PostgreSQL, Redis, MongoDB, Express.js, REST APIs, GraphQL, WebSockets
Deployment & CI/CD: Git, Docker, Kubernetes, Jenkins, Amazon Web Services, Google Cloud, Azure Cloud
Build & Testing: Node.js, Webpack, Babel, Jest, Cypress, React Testing Library
AI/ML Engineering: OpenAI Embeddings, LangChain, Prompt Engineering, Vector Databases (EdgeDB), RAG, Pytorch

EDUCATION

Master of Computer Science | *Illinois Institute of Technology* | *Chicago, IL* — Jan 2023 – Dec 2024