

# Rahul Luthra

Staff Software Engineer | Tech Lead | AI/ML Solutions

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**Technical leader and frontend engineering expert** with over a decade of experience building high-performance web applications at scale. As a Staff Software Engineer at Apple, I lead cross-functional teams delivering features for Apple Music, Podcast, and TV apps while driving **AI-powered developer tooling**—building code RAG systems, MCP servers, and contributing to secure internal AI coding assistants. My deep expertise in React, TypeScript, and modern web architectures enables me to bridge **AI/ML capabilities with exceptional user experiences**. Passionate about mentoring engineers on AI best practices, setting technical direction, and building **intelligent, scalable products**.

## SKILLS & EXPERTISE

### AI & ML Solutions

MCP server design, prompt engineering (system prompts, few-shot, chain-of-thought), RAG (embeddings, vector search, chunking), LLM function calling, streaming UI patterns, AI evals and quality measurement.

### Technical Leadership

Team mentoring, code reviews, best practices advocacy, technology roadmaps, cross-functional collaboration, and driving engineering excellence.

### Frontend & UI/UX

React.js, Next.js, Svelte, SvelteKit, TypeScript, JavaScript, HTML, CSS, Sass, Tailwind CSS, Material UI - crafting intuitive and responsive interfaces.

### Backend & APIs

Node.js, Express, REST APIs - building robust services and data layers to support frontend applications.

### Performance & Optimization

Redux, Context API, web performance optimization, SEO, responsive design - ensuring applications are fast and efficient.

### Tools & Practices

Git, GitHub, Scrum, Kanban, JIRA, Webpack, Yarn, NPM, Jest, Mocha - driving iterative development.

## AI COMMUNITY & LEADERSHIP

- Led internal tech talks on effective AI usage, LLM fundamentals, and prompt engineering best practices.
- Mentored internal GenAI developer community members on building MCPs, agents, agent skills, and AI-powered applications.
- Helped onboard engineering teams to AI developer tools and workflows.
- Forked and extended open source AI coding tools based on continuous community feedback to improve developer experience.

## PROFESSIONAL EXPERIENCE

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- **Apple Inc** Cupertino, CA | Sep 2022 - Present  
Staff Software Engineer
  - Lead development of new features and maintain existing features for Apple Music, Podcast, TV, and other media apps using Svelte and SvelteKit.
  - Oversee the technical direction of frontend projects, ensuring adherence to coding standards and maintaining code quality.
  - Designed and built MCP servers for media applications to support AI-driven personalization and content delivery.
  - Built code RAG systems and customized open source AI dev tools for internal developers.
  - Collaborated with AI partners and internal teams to define AI agent sandboxing strategy; contributed to building secure internal AI coding assistant.
  - Perform effective code reviews, mentor engineers, and advocate for best practices in software engineering.
- **Whoop Inc** Boston, MA | Feb 2022 - Sep 2022  
Staff Software Engineer
  - Developed and maintained the Join Whoop and Whoop Shop applications.
  - Led and mentored a team of frontend developers, providing guidance and conducting code reviews.
  - Advocated for improvements to product quality, security, and performance with company-wide impact.
- **CarGurus Inc** Cambridge, MA | Mar 2018 - Feb 2022  
Principal Software Engineer
  - Translated UI/UX wireframes into functional code, optimizing for speed and scalability.
  - Implemented new technologies and frameworks to improve performance across the platform.
- **John Hancock Financial Services** Boston, MA | Nov 2016 - Mar 2018  
Senior Technical Lead
  - Assisted solution architects in designing scalable financial applications.
  - Led process innovations and defined frontend best practices across multiple teams.
- **CVS Health** New York, NY | Oct 2015 - Nov 2016  
Lead Engineer
  - Led frontend architecture for enterprise digital applications; contributed to CVS Health's innovation lab.
- **Genpact** Noida, India | Jul 2013 - Oct 2015  
Consultant
  - Designed multi-channel reusable UI framework; mobile-enabled Genpact's Akritiv Productivity suite.
- **InstantPay** New Delhi, India | May 2012 - Jul 2013  
Engineering Leader (Founding Member)
  - Architected core neobanking platform from scratch; led engineering team and defined technology roadmap.

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**EDUCATION:** Bachelor's Degree in Computer Science — Amity University | 2008 - 2012 | Noida, India