Sitaram Iyer

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Distinguished Software Engineer

- **Engineering leader with 20 years at Google**, rising from L4 to Distinguished Engineer (Senior Director/L9). Actively seeking a VP or Senior Director level role in engineering/product preferably at a mid-sized scale-up company, focused on expanding teams and ideally applying AI/LLMs to real-world challenges
- **Gen AI and LLM expertise** at Google with Bard chatrooms, and later focus on applying LLMs to visual decision making, discovery and user growth, guided conversations, creative brainstorming and authoring, reducing hallucinations, and business uses like equitable shopping, legal aid, and contract analysis.
- **Extensive experience** initiating, leading, and growing several teams of up to 70 engineers to build mission-critical systems, such as Google's web search crawl/indexing and knowledge graph, and social impact efforts like jobs, education, and news search. Created infrastructure strategy for 1,500 engineers to address Google users' deeper needs. Passionate about improving communities through impactful digital innovation.

KEY SKILLS

Large Language Models (LLM) • Applied AI • Large Scale Systems • Cross-functional Team Leadership • Cross-Organization Collaboration

PROFESSIONAL EXPERIENCE

Google - Social Impact Search

2014 - 2023

Distinguished Engineer (L9)

Pursued different missions to help underprivileged and marginalized groups through job search, education, financial wellness, and social justice. Navigated stakeholders, policy and legal challenges, and external partners, creating space for engineers and product managers (2 to 5 directs, teams of 5 to 15) to build effective and compassionate products.

- **Big Moments (2020 - 2023):** Created and led a Google Search project focusing on social justice and impactful change, guiding a cross-functional team of 25. Developed search features to provide comprehensive context on major and usually sensitive news events, including the Ukraine war, BLM movement, Roe v Wade overturn, coups, trials, and the Oscars. Innovations included live updates, "lives affected" scale estimates from Reuters, Getty images, in-depth news explainers, donation links for crises (e.g., Ukraine refugee support), social media voices for real-time perspectives, podcasts, and timely updates on events like award shows. Press coverage.
- **Financial Wellness (2020):** Advised teams to help with unemployment benefits especially for job seekers during the pandemic. Created features that improved financial literacy. Google blog post from Oct 2021.
- **College Search (2017 - 2019):** Led a team to launch Search features for college name and list queries, to help especially underprivileged students make informed college choices and find their best fit by 1) avoiding predatory schools, 2) recognizing lower-cost options, 3) understanding ROI, 4) choosing programs aligned with their career goals, 5) seeing student life and if they will fit in, and 6) getting notified about financial aid. Google blog posts from June 2018 and August 2019.
- **Job Search (2015 - 2017):** Led a team to launch a job search feature for queries like “accountant jobs near me”, by collaborating with major job boards and aggregators to enable the user to search for and filter jobs to identify and apply to relevant listings, understand estimated salaries and benefits, look for remote work, and get notified of new jobs. Google blog posts from June 2017 and Nov 2017.

Google - Search Infrastructure 2003 - 2014

Member of Technical Staff (L4) to Distinguished Engineer (L9)

Led search infrastructure projects such as web and knowledge graph indexing, building large, fast, and complex systems directly in data centers before the advent of Cloud technologies.

Major Projects:

- **Foundation (2014 - 2015):** Worked on unifying all of Google's Search infrastructure including private/public, structured/unstructured, crawl/indexing/serving systems into a single "database of everything" and shared business logic with modular APIs and microservices.
- **Livegraph (2012 - 2013):** Built the incremental indexer for the Knowledge Graph, with low-latency reconciliation and composition. This powers Knowledge Panels and many other Search features.
- **Alexandria (aka Caffeine) (2007 - 2013):** Led the team to build the incremental indexer for Web Search that scaled to 1T web pages, averaged 1 min latency, and reduced staleness by 50%. It was built on a 250 PB Percolator based transactional data store running on 15,000+ machines, and had innovative techniques to handle diverse content types, redirects, duplicates, hyperlinks, pagerank, webmaster errors, and hacked sites. Google blog post from June 2010.
- **Indexing pipeline (2005 - 2010):** Built a batch indexing pipeline that scaled to 200B web pages with 36-hour latency, implementing a virtual segmented 10 PB repository that was needed to ingest a continuous crawl.
- Index scaling (2003 - 2005): Launched 8B web page index over 3 weeks on the eve of Microsoft's 5B index.

Microsoft Research, Cambridge Summer 2001

Eng Intern

- **Publication:** Squirrel: A decentralized peer-to-peer web cache. Sitaram Iyer, Ant Rowstron, Peter Druschel. Published in the Symposium on the Principles of Distributed Computing (PODC), July 2002, Monterey, CA.

EDUCATION

RIce University, Houston, TX 2001 - 2003 (graduated in 2005)

Ph.D. in Computer Science

- **Dissertation:** Application-assisted physical memory management
- **Related publication:** Practical, transparent operating system support for superpages. Juan Navarro, Sitaram Iyer, Peter Druschel, Alan Cox. Symposium on OS Design and Implementation (OSDI), Dec 2002, Boston, MA.

RIce University, Houston, TX 1998 - 2001

M.S. in Computer Science

- **Thesis:** Anticipatory disk scheduling
- **Publication:** Anticipatory scheduling: A disk scheduling framework to overcome deceptive idleness in synchronous I/O. Sitaram Iyer, Peter Druschel. Symposium on OS Principles (SOSP), Sep 2001, Banff, Canada.

Indian Institute of Technology, Bombay 1994 - 1998

B.Tech. in Computer Science

- **Thesis:** Xority: A measure of separability of training sets for neural network size estimation.
- **Publication:** Xority: A measure of separability of training sets to estimate hidden layer size in neural networks. Sitaram Iyer, Pushpak Bhattacharyya. Intl. Conference of Knowledge Based Computer Systems (KBCS), Dec 1998, Bombay, India.