Sitaram Iyer

ex-Google Distinguished Engineer

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OBJECTIVE

I am highly motivated to work on a mission that tackles a genuine problem for users, preferably but not limited to those related to social impact and justice. My core strength is unlocking sensitive areas by finding new framing and approaches to difficult problems. I am open to opportunities in various industries, but I'm particularly interested in working on a substantial project that prioritizes users' deeper needs and allows me to use my expertise to make a meaningful impact on the world over the next decade.

EXPERIENCE

Google - Social Impact Search features - *Distinguished Engineer (L9)*

2014 - 2023

I spent the last decade at Google passionately pursuing different missions to help underprivileged and marginalized groups through job search, education, financial wellness, and social justice. My role was primarily navigating stakeholders, policy and legal challenges, and external partners, in order to create space for the engineers and product managers, managing small teams (2 to 5 directs, teams of 5 to 15).

Projects:

- **Big Moments** (2020-2022): queries like [ukraine war] and [oscars], and other sensitive and/or popular moments such as natural disasters, protests, celebrity deaths, mass shootings, coups, trials, sporting events, etc., that dominate the news cycle globally.
    - Automatic moment identification with Search features like "lives affected" from Reuters, Getty Images, In-depth news, Key people, Nominees, Podcasts, and How to help.
- **Financial Wellness** (2020): queries like [payday loans] (attempted) and [unemployment] (advised)
    - Google blog post from Oct 2021
- **College Search** (2017-19): queries like [ucsc] and [art schools near me]
    - Google blog posts from June 2018 and August 2019
- **Job Search** (2015-17): queries like [jobs near me] and [entry level jobs in finance]
    - Google blog posts from June 2017 and Nov 2017 (with salaries, remote jobs)

Google - Search Infrastructure - *Member of Technical Staff (L4) to Distinguished Engineer (L9)*

2003 - 2014

In the decade before that, I worked on Search infrastructure projects at Google, like web and knowledge graph indexing, leaning on my systems background relevant to raw systems before the advent of Cloud and AI technologies. I was promoted 5 times during this decade.

Projects:

- **Foundation** (2014-15)
  - Attempt to unify structured/unstructured, private/public, crawl/indexing/serving systems
- **Livegraph** (2012-13)
  - Incremental composition of the Knowledge Graph
- **Alexandria (aka Caffeine) (**2007-13)
  - Incremental indexing system scaled to 1T web pages, averaging 1 min latency
  - Google blog post from June 2010
- **Indexing pipeline** (2005-2010)
  - Batch indexing pipeline that scaled to 200B web pages with 36 hour latency
- **Index scaling** (2003-2005)
  - Launched 8B web page index over 3 weeks on the eve of Microsoft's 5B index

Microsoft Research, Cambridge - *Eng Intern*

Summer 2001

- **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 - *Ph.D. in Computer Science*

2001 - 2003 (graduated in 2005)

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

RIce University, Houston, TX *-M.S. in Computer Science*

1998 - 2001

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

Indian Institute of Technology, Bombay - *B.Tech. in Computer Science*

1994 - 1998

- **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. Published in the Intl. Conference of Knowledge Based Computer Systems (KBCS), Dec 1998, Bombay, India.