Aaditya Uppal

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Summary

Results-driven **Tech Lead / Senior Software Engineer** with a proven track record of **owning technical roadmaps**, architecting highly scalable distributed systems (processing **1B+ messages daily**), and **leading cross-functional teams** to deliver impactful solutions. Expertise in cloud infrastructure, system design, and **achieving significant improvements in reliability (99.99% uptime), performance (90min to <5s latency reduction), and cost savings ($1M+ annually)**. Passionate about mentoring engineers and driving technical strategy.

Technical Skills

- **Languages:** Go (Golang), C, C++, C#, Python, Java, JavaScript, TypeScript, Ruby
- **Frontend & Web Technologies:** AngularJS, Vue.js, HTML, CSS, SASS, jQuery
- **Backend & Distributed Systems:** Microservices, Cloud Infrastructure, API Development, Reverse Proxy
- **Platforms & Tools:** Kubernetes, Docker, Git, Agile Development, .NET, Android SDK
- **Databases & Storage:** PostgreSQL, MySQL, NoSQL, Redis, Kafka

Work Experience

Uber Technologies Inc., Seattle, WA

Senior Software Engineer / Tech Lead – Communications Platform & Intelligence *(December 2021 – Present)*

- Led the technical design strategy and implementation for Uber's global communication platform initiatives across **cross-functional teams (engineering / product / external vendors).**
- Owned the **technical roadmap and architecture** for Intelligent Routing Optimization and SMS/OTP systems.
- Designed and launched a self-service configuration management tool, saving 30+ engineering hours/month.
- Improved Intelligent Routing **uptime from ~75% to 99.99%**, enabling support for new non-OTP use cases.
- Reduced **Time-To-Mitigate** for critical vendor issues **from 80+ minutes to under 5 minutes**.
- Prevented OTP toll fraud and enabled over **$1M/year in savings** through technical and vendor collaboration.
- Scaled infrastructure handling 1B+ messages daily; **optimized delivery of marketing emails (90min → <5s)**.
- **Mentored 6 engineers**, including 2 senior engineers and 2 interns.

Microsoft Corporation, Redmond, WA

Software Engineer II – Azure AD Authentication & Identity Gateway *(February 2018 – December 2021)*

- Built and optimized large-scale cloud authentication services, improving performance, scalability, and resilience.
- Developed application-layer reverse proxies with load balancing and fault tolerance.
- Designed resilient communication services for authentication and authorization systems.
- Provided technical leadership, project planning, and mentorship to junior engineers.

FactSet Research Systems, Norwalk, CT

Software Engineer *(October 2016 – February 2018)*

- Developed a scalable front-end framework using AngularJS, improving modularity and code reuse across multiple FactSet applications.
- Designed and built cross-browser UI components for enhanced user experience.
- Developed a Vue.js-based mobile UI framework to improve accessibility and responsiveness.

Samsung R&D, New Delhi, India

Software Engineer II *(July 2013 – July 2014)*

- Contributed to the development of Samsung Smart TV Middleware using the GStreamer framework on Linux-based Tizen OS.

Internships & Research Experience

- **Intel Corporation, Austin, TX** *(Jan 2016 – Aug 2016)* – Automated optimization of CPU path timing and developed debugging tools for CPU bottlenecks.
- **Samsung R&D, Austin, TX** *(May 2015 – Aug 2015)* – Developed C++ backend for Android stress tests and random assembly instruction validation.

- **DRDO (Defence Research & Development Organization), Bangalore, India** *(May 2012 – July 2012)* – Developed radar controller software and implemented stabilization algorithms for airborne radar systems.

Education

Texas A&M University, College Station, TX

Master of Science in Computer Engineering *(August 2014 – August 2016)*

- GPA: 3.89/4.0

National Institute of Technology (NIT), Hamirpur, India

Bachelor of Technology in Electronics & Communication *(August 2009 – May 2013)*

- GPA: 7.65/10

Honors & Leadership

- **Samsung R&D Intern Award**, August 2015.
- **Technical Education Scholarship Holder**, 2009–2013.
- **President**, Society for Promotion of Electronics Culture, NIT Hamirpur – Led initiatives promoting robotics and programming.
- **Academic Excellence** – Consistently scored 100% in Mathematics in Grade 10 & 12; NTSE & Regional Olympiad Ranks: 37, 16.

Academic Projects & Research

- **Bus Routing Android App** – Built an application utilizing multi-threaded graph search for efficient route selection.
- **Survey Data Management** – Developed an end-to-end SaaS for survey data visualization and hierarchical access control using Ruby on Rails.
- **Heuristic-Based Blocks World Solver** – Implemented A* search algorithm to optimize game-solving strategies.
- **Search Algorithm Performance Analysis** – Compared heuristic (A*) and uninformed (BFS, DFS, Bidirectional) search algorithms.
- **Twitter Trending News App** – Developed an Android app for real-time Twitter trend aggregation.
- **Optimizing Cache Performance** – Designed an improved Dirty Block Index system for enhanced cache performance.