Danish Rehman

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🔖 Summary

- **Technical Lead** with over 10+ years of expertise in the Ad tech and SaaS sectors, specializing in crafting and scaling high-performance, cutting-edge tech products.
- **As a founding member** collaborated closely with executive board members in scaling the engineering organization from 3 to 30 members.
- **Architected** critical technical projects, ensuring performance and scalability. Build technical solutions tailored to user specifications and devised architectural strategies for frameworks, expediting the development process.

📋 Professional Experience

Staff Software Engineer
San Francisco, CA
Founding member, Aspire
2018 – 2023

- Architected and implemented the **Messaging microservice** facilitating communication for multiple brand users. This service integrated with Gmail, Outlook, and IGDM, processing over millions of messages daily while maintaining a *99.99%* reliability rate.
- Led the development of a **Workflow microservice** which orchestrated and streamlined campaign-critical tasks, helped scale the number of campaigns 10 folds and reducing campaign completion time by *30%*.
- Designed and implemented **Automation-as-a-Service platform**, streamlining custom workflows which reduced manual interventions by *60%* when collaborating with a creator in a campaign. Worked closely cross teams to identify and automate key touchpoints.
- Implemented the **Shared inbox** capability in the messaging service which allowed multiple users to access and manage a common email address. This helped the brand delegate and work at scale, resulting in a significant uptick in the volume of communication and ensuring a 50% faster response time.
- Established a **culture of observability** using Datadog APM throughout the engineering organization. Set and enforced SLOs for every API, ensuring consistent SLA compliance. This led to reduction in P1 bug resolution time from *10 days to 3 days*.

Senior Software Engineer
Palo Alto, CA
Adserv, Criteo
2016 – 2018

- Achieved annual cost savings of *$2 million* for CRITEO by meticulously planning and executing a 12-month migration of a recently acquired company's infrastructure serving *100K QPS* from **AWS to CRITEO's proprietary data centers**. Maintining the high avaibility of *99.999%* when migrating live traffic.
- Architected a **'Reporting Rollup Storage Platform'** tailored for time-sensitive data, achieving high-throughput of *40K QPS*. Implemented using worker nodes that execute data rollup tasks and persist results in Cassandra which is later consumed by the reporting service.

Software Engineer
San Francisco, CA
User mapping system, Brightroll
2015 – 2016

- Engineered an in-memory, lock-free data structure (Urcu - linux lockfree datastructure) for the **'User Mapping System'**—a platform that aligns user identifiers across various systems. This enhancement achieved a *500%* reduction in datastore load.
- Designed and implemented a **'Cookie Matching Server'**, adept at synchronizing user identifiers across ad platforms, managing a *60K QPS*. This server streamlines targeted advertising by bridging communication gaps in the ad tech ecosystem.
- Designed a **modular rate limiting solution** utilizing the token bucket algorithm, enabling granular rate-limiting per partner, per thread. Achieved efficient rate-limiting performance at *10K QPS*.

Software Engineer   Bangalore, India

Optimization, Gibibo   2010 – 2013

- Engineered an **'Adaptive Expiry aAlgorithm for Memcached'**, enhancing cached data management and propelling the hit rate from *28% to 58%*.

- Developed a **'MongoDB-driven monitoring system'** for critical logs, designed to issue real-time alerts, resulting in the resolution of *80%* of critical logs within the initial hour.

- **'Integrated Pybloomfilter''** to optimize API interactions with external vendors, successfully reducing external API calls by *50%*.

🧰 Programming Languages, Frameworks and Tools

Programming Languages: Python 🐍, NodeJS ⓙⓢ, Typescript, React, C

Databases: MySQL, PostgreSQL, Redis, Cassandra

Cloud platforms: GCP **G**, AWS aws

🏛 Education

Masters in Computer Science   2013 - 2015
🏛 *University Of Southern California, USA*

B. Tech in Information Technology   2005 - 2009
🏛 *NIT Allahabad, Allahabad, India*