

# Danish Rehman

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 San Francisco, California

## Summary

- **Technical Lead** with over a decade of expertise in the Ads and SaaS sectors, specializing in crafting and scaling high-performance, cutting-edge tech products.
- **Served as a founding member**, collaborating closely with executive board members in scaling the engineering organization from 3 to 30 members.
- **Architected** critical technical projects, ensuring performance and scalability. Building technical solutions based on user requirements and making architectural decisions to scale both infrastructure and engineering resources in support of organizational objectives.

## Professional Experience

### Staff Software Engineer

San Francisco, CA

*Founding member, Aspire*

2018 – 2023

- Designed and spearheaded the creation of a **Shared Messaging platform** facilitating communication for multiple brand users via a unified email. This platform integrated with Gmail, Outlook, and IGDM, processing over millions of messages daily while maintaining a 99.99% reliability rate.
- Developed and led the development of a **Workflow System** which orchestrated and streamlined campaign-critical tasks, reducing campaign completion time by 50% for brands on the platform. A campaign comprises of different business process like inviting creator to campaign, negotiating terms, sending and tracking product and review and tracking proposed content from creator and finally paying the creator.
- Spearheaded the development and launch of the **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.
- **Established a culture of monitoring and alerts** 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 5 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**. Maintaining the high availability 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 🌐, AWS 🐘

## Education


**Masters in Computer Science**

2013 - 2015

 *University Of Southern California, USA*

**B. Tech in Information Technology**

2005 - 2009

 *NIT Allahabad, Allahabad, India*