Akshat Mahajan
Senior Software Engineer

me@akshatmahajan.com (✉)
/in/mahajanakshat (LinkedIn)
akshatmahajan.com (website)

EXPERIENCE

Cloudflare Boston, MA (Remote)
Software Engineer Feb. 2022 — Present

- Designed and shipped cryptographic identity for AI agents from scratch in **one month**. I authored the first-ever Rust SDK (**200K+ downloads**), architected a Go pipeline to ingest 100K+ public keys with 10-min SLAs, and set up the supporting infrastructure to process requests with <1 ms latency.
- Shaved tail latency by **1000x** (90 ms → 8 μs) for a high-performance Layer 4 proxy. I built an efficient background cache with Rust's `tokio` and `arc_swap` to prefetch critical data, following extensive profiling to resolve long-tailed queries to our key-value store.
- Contributed to **a Layer 7, Layer 4 and Layer 3 data plane** to accelerate traffic across the Cloudflare backbone for internal services. I implemented support for MPLS, designed DSL semantics for weighted random selection of hops, and maintained probing infrastructure for global real-time latency feedback.
- Built SLO burn rate monitoring, performance testing, and automated configuration management for a fleet of HTTP/2 and HTTP/3 proxies, enabling the team to catch performance regressions on real-world traffic for products such as Apple Private Relay.

Plangrid (Y Combinator) → Autodesk (acquisition) San Francisco, CA
Devops Engineer Sep. 2017 — July 2019

- Cut PostgreSQL cluster disaster recovery time **by 95%+** using streaming replication, warm/hot standbys, WAL-to-S3, and automated backup tests.
- Built PlanGrid's canary release platform on self-hosted Kubernetes with Istio, Spinnaker, and Python automation; this enabled safe, incremental rollouts and automated reverts when SLOs were breached.
- Improved platform reliability/security with SOC 2 controls, self-serve infra-as-code (Python, Terraform, Salt); on-call for AWS SQS, Redshift, and Lambda infra behind 100+ services.

BrightEdge Technologies San Mateo, CA
Software Engineer July 2016 — Aug 2017

- Sole developer of an SEO recommendation system — analyzed 40 million domains each week using a distributed batch processing pipeline built on Hadoop, Hbase and Yarn.
- Quintupled network throughput after leading a switch to a binary wire protocol for intra-datacenter traffic (200 MB/s → 1 GB/s), using Apache Thrift.

EDUCATION

Brown University *Masters in Computer Science*
Teaching assistant for Distributed Systems Jan. 2020 — Dec 2021
University of California, Los Angeles (UCLA) *Bachelor of Science, Physics*
cum Laude, with College Honors Jun. 2012 — Jun 2016

PROJECTS OF NOTE

- `privacy-go`: Plug-and-play gRPC fork. Guarantees, with **no** code changes, that only certain functions in the call stack can view sensitive data sent from a separate microservice; all other functions in the call stack see ciphertext. *Self-directed research*.
- Contributed a feature to `Spinnaker`, allowing developers to add custom Datadog tags as first-class feature in its monitoring ecosystem. *Python*.
- Contributed a feature to `Packer`, allowing developers to attach multiple temporary security groups in AWS AMI builds. *Golang*.