Akshat Mahajan
Senior Software Engineer

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EXPERIENCE

Cloudflare   Boston, MA (Remote)

Software Engineer   Feb. 2022 — Present

- Led Cloudflare's Web Bot Auth: authored the Rust SDK (200K+ downloads), built service in Rust with Lua FFI, wrote Go pipeline crawling 100K+ public keys with 10-min SLAs.
- Reduced Argo Smart Routing tail latency by $1000\times$ (90 ms $\rightarrow 8\ \mu$s): removed head-of-line blocking queries and implemented in-memory cache with `tokio` + background updates.
- Introduced SLO burn rate monitoring and observability with Clickhouse, Prometheus and Grafana for multiple high-performance QUIC, TCP, UDP and IP proxies.
- Implemented geo-egress features, MPLS protocol support, and a domain-specific language (all in Rust) to achieve fine-grained source routing across Cloudflare platform.

Plangrid (Y Combinator) $\rightarrow$ 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 Kubernetes with Istio, Spinnaker, and Python automation for safe incremental rollouts, catching application failures 10% sooner.
- 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 $\rightarrow$ 1 GB/s), using Apache Thrift.

EDUCATION

Brown University   *Masters in Computer Science*

Specialized in 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 only certain call sites can view sensitive data sent across microservices, with no application changes needed. *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*.