Akshat Mahajan

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EXPERIENCE		
	Cloudflare	Remote (Boston, MA)
	Systems Engineer, Argo Smart Routing	2/2022 - Present

- Designing and implementing proprietary improvements to Cloudflare's data plane in Rust and Go.
- Implementing Orpheus, a unique first-in-class system to salvage web requests on bad network links by trying new transit paths in-band.

Systems Engineer Intern (Master's), Argo Smart Routing   5/2021 - 8/2021

- Contributor to Cloudflare's control plane infrastructure in Go, managing traffic for all customer websites globally
- Built an A/B testing framework for control plane changes that reduced origin server unavailability + congestion impact on Cloudflare's data centers
- Developed (and implemented) new measures of unavailability reduction and traffic congestion impact as project lead on A/B framework

PlanGrid → Autodesk (acquisition)   San Francisco, CA
Site Reliability Engineer   9/2017 - 7/2019

- Developed and operated self-hosted Kubernetes clusters; managed networking, routing and platform reliability for over 100+ services across 2 intl. data centers
- Implemented a 95%+ improvement in disaster recovery objectives of multi-TB Postgres databases through architecture overhaul
- Built infrastructure-as-a-service with Salt, Cloudformation, Python and Terraform; undertook VPC design and Postgres load balancing for new Australia datacenter

BrightEdge Technologies   San Mateo, CA
Distributed Systems Engineer   7/2016 - 9/2017

- Sole maintainer of distributed data ingestion pipeline on HDFS/Hbase; managed Yarn-based batch processing for 30-40 million requests weekly.
- Slashed database monitoring latency by 96% by implementing priority queueing that "remembers" slow queries and diverts them to specialised channels.

PROJECTS OF NOTE
Open Source

privacy-go, a gRPC fork that secures sensitive data within Golang microservices by extending the runtime semantics of protocol buffers

Qbox, a Layer 7 network proxy coordinator for distributed sagas, simplifying monolith to microservice migration

Contributor to Netflix's Spinnaker, allowing developers to add custom Datadog tags as first-class feature in its monitoring ecosystem

Contributor to Hashicorp's Packer, allowing developers to attach multiple temporary security groups in AWS AMI builds

caprice, a Go client for RANDOM.org's API, capable of generating truly random non-deterministic data for cryptographic purposes. *(unmaintained)*

More projects available at `https://github.com/AkshatM`

EDUCATION

University of California, Los Angeles (UCLA)   Los Angeles, CA
Bachelor of Science, Physics,   July 2012 - June 2016
cum Laude with College Honours

Brown University   Providence, RI
Masters of Science, Computer Science   Jan. 2020 - Dec. 2021
Teaching Assistant, CS1380: Distributed Systems
Research Assistant, Kubernetes operators research

DISTINCTIONS

9K+ Reputation, *Stack Overflow*   2016-Present
Top Writer 2016 and 2017, *Quora*   2016-2017
2015 Sharpe Fellow, *University of California, Los Angeles*   October 2014
NASA Planetary Data System Fellowship, *NASA/UCLA*   2013-2015