Akshat Mahajan

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CURRENT	**Brown University**	Providence, RI
	Masters of Science, Computer Science	Jan. 2020 - Dec. 2021

- *Distributed Systems Research*: Forked gRPC and protocol buffers to have data flow assertions, preventing sensitive information leaks across microservices

- *Distributed Systems Research*: Created a prototype service mesh proxy capable of coordinating distributed sagas, simplifying monolith to microservice migrations

EXPERIENCE	**Cloudflare**	Remote (Boston, MA)
	Software Engineer Intern, Argo Smart Routing	5/2021 - 8/2021

- Prototyping reachability improvements to proprietary Internet-wide packet routing algorithms using Go, reaching a 2% improvement in global connectivity

- Developed automated experimentation pipeline that identified candidate routes, performed canary-based rollouts to an edge network fleet, and analyzed data

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 97.9% improvement in disaster recovery objectives of multi-TB Postgres databases through architecture overhaul

- Built infrastructure-as-a-service with Salt, Cloudformation and Terraform; undertook VPC design and Postgres load balancing for new Australia datacenter

- Automation tooling development with Python, Docker, bash e.g. network circuit breakers, DNS failover with healthchecks, diff generation for production changes.

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.

PERSONAL PROJECTS *Open Source*	**CHR**, a pure-Python consistent hash ring implementation designed for pedagogical purposes, implemented completely from scratch with no advanced builtins.

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

wildcard-import-fixer, a command-line refactoring utility to automatically find and fix wildcard imports from Python code

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

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	

DISTINCTIONS	**8K+ 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