# Akshat Mahajan

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(distributed systems)

akshatm.com

**CURRENT** 

#### **Brown University**

Providence, RI

Master's of Science, Computer Science, Jan. 2020 - Jan. 2022 Systems track; researching service mesh performance limits with Dr. R. Fonseca

**EXPERIENCE** 

#### **PlanGrid** → **Autodesk** (acquisition)

San Francisco, CA

DevOps/Infrastructure Engineer

- 9/2017 7/2019
- Developed and operated self-hosted Kubernetes clusters; managed networking, routing and platform reliability for over 100+ services on  $\sim$  50 AWS nodes
- Contributor to Netflix's Spinnaker refactored Netflix's Spinnaker monitoring and shipped custom Datadog tags as first-class feature
- Implemented a 97.9% improvement in RTO/RPO 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

DevOps Engineer

7/2016 - 9/2017

- Sole maintainer of distributed data ingestion pipeline on HDFS/Hbase; generated individual SEO recommendations for 30-40 million URLs weekly.
- Improved monitoring tooling latency by 96% after implementing priority queueing that "remembers" slow queries and diverts them to specialised channels.
- $\bullet$  Quintupled network throughput (200 MB/s  $\rightarrow$  1 GB/s) by implementing Thrift serialization for Python code talking to Hbase over fixed bandwidth cables.
- Built out AWS fallback nodes for data pipelines colocated in physical datacenters
- + staging environment from scratch for monolithic data services.
- Implemented pre-commit linting, test runner execution and Redux-based caching web components for React developers.

#### DataWeave Software Pvt. Ltd.

Bangalore, India

Intern - Data Semantics and Engineering

6/2015 - 9/2015

- Natural language processing over millions of short texts at a B2B corporation delivering business insights from public web-scale data.
- Designed and implemented a flexible and modular document clustering system for short texts using Google library Word2Vec and Python.

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.

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

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

**EDUCATION** 

## University of California, Los Angeles (UCLA)

Los Angeles, CA July 2012 - June 2016

Bachelor of Science, Physics,

**DISTINCTIONS** 

cum Laude with College Honours

Top Writer 2016 and 2017, Quora

2016-2017

6K+ Reputation, Stack Overflow

2016-Present October 2014

**2015 Sharpe Fellow**, University of California, Los Angeles

NASA Planetary Data System Fellowship, NASA/UCLA

2013-2015