Akshat Mahajan

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EXPERIENCE

BrightEdge Technologies — San Mateo, CA
DevOps Engineer — 7/2016 - Present

- Sole maintainer of a distributed data ingestion pipeline on HDFS/Hbase; generated individual SEO recommendations for 30-40 million URLs weekly.

- Optimised and refactored in-house Python-based process monitoring system, improving latency by 96% after characterising throughput with queueing theory.

- Implemented Zabbix monitoring and cloud-based redundancies for data collection services, worked on including a distributed tracing system.

- Implemented pre-commit linting and test runner execution to simplify integration testing for React developers with Git/Jenkins.

Daily Bruin Online — Los Angeles, CA
Web Developer / DevOps Team Lead — 9/2015 - 6/2016

- Leading core DevOps team, worked on transitioning live 300k views/month site to cloud platform. Handled all Student Media infrastructure operations.

- Built secure database application of real-time updated news contacts using Node.js and OAuth verification scheme.

DataWeave Software — Bangalore, India
Data Systems & Engineering Intern — 6/2015 - 9/2015

- Grouping similar retail products using Google's Word2Vec neural network on short semi-structured texts, with an 80% improvement in precision/recall.

- Designed front-end API interfaces for internal use using React.js that improved QA assessment and clustering performance tracking.

TECHNICAL SKILLS

Python (strong); bash; Node.js; (C++) + Go + Scala (all moderate); anything as needed. Services: haproxy, Redis, HDFS, Hbase, MySQL, Zookeeper, Squid, AWS. Soft: tradeoffs in distributed systems, appropriate algorithmic design, how to identify deadlock in systems with `strace` and `lsof`.

PERSONAL PROJECTS
Open Source

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

Parabash (in progress), a high-concurrency functional DSL wrapper around Bash that aims to simplify writing asynchronous Bash scripts for data pipelining tasks.

go-exercise, a brute-force cycle detection algorithm in Go. Finds cycles by verifying non-zero trace of raised powers of the graph's adjacency matrix.

hashable-collections, a Python library on `pip` that extends lists and dictionaries to be hashable.

wildcard-import-fixer, a command-line utility to lint Python code. Automatically finds and fixes wildcard imports for you

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

Extra Classes

Systems & Signals, Computer Networks: Physical Layer, Statistical Programming (graduate class), Data Science: Algorithmic/Mathematical Foundations, Discrete Mathematics

EdX Classes
(UC-Berkeley)

Scalable Machine Learning *(Grade: 100%)* — June 2015
Intro. to Big Data Using Apache Spark *(Grade: 92%)* — June 2015

DISTINCTIONS

Top Writer 2016 and 2017, *Quora* — 2016-2017

4K+ Reputation, *Stack Overflow* — 2016-Present

2015 Sharpe Fellow, *University of California, Los Angeles* — October 2014

NASA Planetary Data System Fellowship, *NASA/UCLA* — 2013-2015