

# Sahil Gandhi

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## EDUCATION

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### University of California, Los Angeles

M.S. Computer Science – (*Specialization: Distributed and Big Data Systems*)

Apr 2019 - Mar 2020

B.S. Computer Science and Electrical Engineering – (*Summa Cum Laude*)

Sep 2015 - Mar 2019

## SKILLS

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**Programming Languages:** Java, Golang, Python, Bash, JavaScript

**Frameworks and Technologies:** Kubernetes, Docker, Protobuf, Vert.x, Helm, Vault, Terraform, AWS, GCP, AZURE, SQL, PostgreSQL, OpenTelemetry, OpenCensus, DataDog, React, RocksDB, Git, Mercurial, UNIX

## WORK EXPERIENCE

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### Confluent, Senior Software Engineer - Control Plane Fleet Management

June 2020 - Present

- As a founding engineer on the Control Plane Fleet Management team, played a critical role in designing scalable solutions for day 1+ operations on cloud clusters
- Spearheaded the design of a new Java-based workflow engine, incorporating the Vert.x framework and Datadog monitor APIs; resulting in a 95% reduction in incident rate and reduced the roll time for the entire fleet from several months to 2 days
- Generalized the workflow engine via a well-defined GRPC contract for seamless compatibility with any Confluent cluster (Kafka, KSQL, etc) and any operation (Upgrade, Restart, Shrink, etc), empowering all cloud teams to leverage maximum parallelism and continuous monitoring
- Streamlined microservice deployment through the design and development of a new cloud-agnostic Golang-based Kubernetes deployment engine; eliminating all manual Helm or Kubectl based deployments, and allowing Confluent to scale from 30 to 10000+ deployments/day
- Developed a unified view of all cluster information through a Golang and ReactJS-based microservice + UI; eliminating manual database commands and reducing manual information stitching from multiple sources
- Lead the design and development of a Golang-based infra CLI to securely communicate with the above services via SSO authentication
- Mentored 5 new employees and interviewed numerous candidates to foster a positive and inclusive work environment

### Microsoft, Software Engineering Intern - Microsoft Research (BuildXL)

Jun 2019 - Sep 2019

- Revamped logging infrastructure in distributed build tool to use ProtoBuf schemas for forward/backward compatibility
- Implemented a caching feature for important log data in RocksDB to speed up log file analyzers between 5x and 200x, allowing software engineers in Windows and Office to gain insights to optimize their distributed builds further

### UCLA ScAi Lab, Undergraduate/Graduate Researcher

Jan 2018 - Jun 2019

- Researched under Dr. Zaniolo and Ariyam Das on real-time streaming DBs, NLP Datalog parsers, and graph visualizations
- Built an n-ary And-Or tree parser for faster querying, an NLP tool to parse Datalog and Python profilers for HAT trees

### Facebook, Software Engineering Intern - Release To Production Team

Jun 2018 - Sep 2018

- Merged functionalities of several testing tools to enable automated re-testing and move to the new CI/CT pipeline
- Optimized the DB design to speed up queries and the validation portal UI by more than 50%, and automated the creation and updates of test results: saving the organization over \$300,000 a year in man-hours

## PROJECTS AND OPEN SOURCE

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**Trivia Bot:** Created an automated bot to tackle online trivia games like HQ Trivia, BTQ, and more (Python, Flask, JavaScript)

**Micromouse:** Designed the PCB and programmed the MCU for an autonomous maze solving robot - (C, C++, Autodesk Eagle)

**Free Throw Classifier:** Created a classifier for basketball shots using 3 Hexiwears mounted on a user's arm - (Python, C++)

**C.A.R.M.:** Created a Chrome extension that lets users instantly message anyone else on the same website - (JavaScript, MQTT)

## AWARDS

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**California Micromouse Comp (CAMM):** 2nd place in 2018 and 1st place in 2019

May 2018, May 2019

**All American Micromouse Comp (AAMC):** 2nd place in 2018 and 2019

May 2018, May 2019

**UC San Diego Hacks 2017:** 1st place in the Genome Link Category

Oct 2017

**UC San Diego Hacks 2016:** 1st place in the ViaSat Category

Oct 2016

## ACTIVITIES

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**UCLA IEEE:** PM ('18-'19), Workshops Manager ('17-'18), OPS Lead ('16-'17), Member ('15-'20)

2015-2020

**UCLA Eta Kappa Nu (HKN):** Membership Chair ('17-'18), Member ('17-'20)

2017-2020

**UCLA Tau Beta Pi (TBP):** Club Liaison ('17-'19), Member ('17-'20)

2017-2020

**UCLA Upsilon Pi Epsilon (UPE):** Member ('16-'20)

2016-2020

**UCLA Supermileage Vehicle - Electric Vehicle:** E.V. Team Lead ('16-'17), Member ('15-'17)

2015-2017