Rachel Sheikh
Software Engineer

571.315.1881
sheikhrachel97@gmail.com
https://rachel-sheikh.com
https://github.com/sheikhrachel

Professional Experience_____

Twitter   **San Francisco, CA**
Software Engineer II: Live Services   Feb 2021 - Present

- Driving and launching the Spaces Discovery Tab in Twitter Clients to enable more users to find Spaces
- Designing and implementing a global ranking algorithm to improve engagement within the Spaces Tab
- Delivered internal tech talks to Twitter Engineering on debugging, building at scale, and other topics
- Driving new endpoints and Dynamo schemas to allow for promoting and featuring Spaces on Twitter
- Delivered new Spaces functionality for Hosts, orchestrating WebRTC session permissions and limits
- Working on feature adds and infrastructure work to scale up to an audience of 321M users
- Worked on a large service migration from AWS into the Twitter Data Centers for live broadcasting
- Mentoring, interviewing, and assisting new hires, junior engineers, and interns

State Farm   **Palo Alto, CA**
Lead Software Engineer: Sundial Labs Independence Team   Jun 2020 - Jan 2021

- Served as Alexa engineering lead both within the Independence Team and across 4 other teams
- Integrated a product-wide GraphQL aggregation layer built in Go to optimise client side runtimes
- Scaled core APIs by converting them over from Node.js to Go in order to reduce cost within AWS
- Developed standards for design and decision documentation across all teams
- Assisted with implementing automated pipelines for building and deploying code with Travis
- Developed step functions to improve cost optimisations through archiving stale data from S3 into Glacier
- Built a Python/Selenium web scraping data aggregation tool to collect data for home-based integrations

Volkswagen Credit, Inc.   **Herndon, VA**
Lead Software Engineer (Covid-19 Layoff): Innovation Labs   Sep 2019 - Apr 2020
Software Engineer: Innovation Labs   Feb 2019 - Sep 2019

- Established a state rebuild mechanism through implementing an Event Sourcing architecture built in Kafka
- Developed a GraphQL aggregation layer for use in VW's e-commerce reservation platform
- Mentored an intern through a computer vision project in PyTorch to analyse vehicle images for damage
- Used Python to build an Alexa skill MVP that enables users to sign in and check payment statuses via voice
- Used Python and React to build a prototype data analytics/simulation platform for dealerships nationwide
- Assisted with user interviews and user testing to drive engineering decision making on customer-facing tools

Discovery Communications, Inc.   **Silver Springs, MD**
Senior Software Engineer (Contract): Media Infrastructure   Nov 2018 - Jan 2019

- Used Python to develop a streamlined data validation pipeline for analysing Discovery's video metadata
- Worked with AWS Elemental Live APIs to create a client-facing user interface for media delivery with Python
- Implemented authentication functionality for internal applications using Okta, Angular 2, and Node

Sequoia Holdings, Inc.   **Reston, VA**
Lead Software Engineer (Company layoff): Blockchain   May 2018 - Jul 2018

- Translated product codebase to Python in order to streamline development on a blockchain MVP
- Delivered company-wide tech talks on blockchain development and design

Microsoft   **Washington, D.C.**
Lead Software Engineer (Contract): Microsoft Azure Blockchain & ML Mar 2018 - Apr 2018

- Led architectural design and development for retail blockchain MVP built with React/Node.js
- Led development of pdf classification model within Azure ML team for creating a query portal

Telos Corporation   Ashburn, VA
Software Engineer: Innovation Lab   Aug 2017 - Mar 2018
Intern Software Engineer: Innovation Lab   May 2017 - Aug 2017

- Utilized the Electron framework to build out a desktop blockchain application to track sensitive assets
- Worked with the backend team to configure Hyperledger Composer and build out REST APIs with Flask

Open Source

ConsoleMe
Contributing to Netflix's open source Python/React web service for AWS IAM and credential management, adding new functionality and integrations with AWS Config for policy and resource rollbacks.
Moto
Contributing to spulec's AWS boto/Python mock testing library, building support for Cloudtrail endpoints for boto and boto3, along with increasing coverage for S3 endpoints.
Orwell
Built a Python/Click CLI for rapidly generating project directories with a file tree, ReadMe generation, git hooks, and CI/CD integration with Travis.
Weep
Contributing to Netflix's open source Go/Cobra CLI, adding increased PowerShell compatibility and improving documentation for NUX.

Talks

KubeCon: Movienight 101: How to Power Video Streaming with Kubernetes and WebRTC
InternHacks: Building a Video Streaming Platform in Go
InternHacks: Intro to Go
Twitter: Building the Spaces Tab and Beta Learnings
Twitter: Debugging with traces in Papertrail and Periscope Admin
Twitter: Local Caching to Protect Redis Schemas at Scale
Netflix: Threat Modeling and Analysis with STRIDE
Volkswagen: Decision Tree Classification for Residual Value Calculations
Volkswagen: AI/ML for Automotive Financing and Underwriting
Volkswagen: Introduction to Blockchain
Sequoia: Distributed User Authentication With Blockchain

Publications

"A comprehensive survey of common video streaming protocols", 2021

Education

Old Dominion University: 2020 - B.S., Psychology, Distinguished Graduate
George Mason University: 2017 - B.S., Computer Science