Rachel Sheikh
Software Engineer / Technical Leader

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, building, and launching the Spaces Discovery Tab to more than 300M users worldwide
- Designed and implemented a global ranking algorithm to improve engagement within the Spaces Tab
- Drove 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
- Drove user safety and automated toxicity filters to demplify abusive Spaces on the Twitter platform
- Delivered on feature adds and infrastructure work to scale up to an audience of 321M users
- Drove a large service migration from AWS into the Twitter Data Centers for live broadcasting
- Mentoring, interviewing, and assisting new hires, junior engineers, and interns
- Received an exceeds expectations rating after first year

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

- Served as Alexa engineering lead/manager both within the Independence Team and across 4 other teams
- Integrated a product-wide GraphQL aggregation layer built in Go to optimize client side runtimes
- Scaled core APIs by converting them over 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

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 analyze 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 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 analyzing 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

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
- 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

Public Bloc   **Washington, D.C.**
Founder / Chief Technology Officer   Oct 2017 - Feb 2018

- Built out MVP for an ethereum-based project funding platform
- Led hiring and engineering team growth efforts

Freelance Experience

Dora   **Remote**
Solutions Architect Consultant   Feb 2022 - Present

- Developing CI/CD and AWS Cloud Infrastructure stack with CDK and Python
- Managing IAM Policies and Roles for Eng and Analytics teams
- Hiring, managing, and growing the engineering team
- Leading conversations on database design, API development, and cloud security best practices
- Leading MVP and v1 architecture design and service creation

Onramp   **Remote**
Teaching Engineer   Aug 2021 - Present

- Mentoring and teaching recent bootcamp graduates in a month long program as they prepare to apprentice
  at companies like Twitch, Coinbase, and Blend
- Creating teaching materials and projects, providing code reviews and guidance, and 1-on-1 support
- Giving lectures on fundamental Go concepts (testing, data structures, etc.)

Ashtech   **Ashburn, VA**
Software Engineer   Apr 2015 - Feb 2017

- Built out backend APIs and static web pages for third-party clients

Open Source
ConsoleMe
Contributing to Netflix's open source Python 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.
Movienight
Building a co-streaming application with Go to deliver real-time video viewing parties/chats for users and offer an
alternative media delivery tool to AWS Elemental. Leveraging Cassandra to handle user metric logging, Firebase
Cloud Firestore to handle storage of video objects, and PostgreSQL to handle video file references and user
metadata. Capturing viewing sessions in Docker and orchestrating multiple sessions through Kubernetes, with
Memcached serving as the caching solution within containers.
Weep
Contributing to Netflix's open source Weep project, adding increased PowerShell compatibility and improving
documentation for new users to utilize the service.

Talks
Twitter: Spaces Tab Service Overview
Twitter: Spaces Tab 101: How to scale out a discovery surface to hundreds of millions of users worldwide
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, Internally released at Twitter

Education

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