

## About Me

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**Open Source  
Contributor/Developer**

Coldstart • Hummingbird • Movienight • Watchlist

**Education**

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

## Professional Experience

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**State Farm**

**Palo Alto, CA**

Lead Software Engineer: Sundial Labs Independence Team

Jun 2020 - Present

- Serving as Alexa engineering lead both within the Independence Team and cross functionally across 4 other teams
- Integrating a product-wide GraphQL aggregation layer built in Go to optimise client side runtimes
- Scaling up core APIs by converting them over from Node.js to Go in order to reduce cost within AWS
- Developing and spearheading standards for design and decision documentation across all teams
- Assisting with creating and implementing automated pipelines for building and deploying code with Travis and CDK
- Developing Lambda step functions to improve cost optimisations through archiving stale data from S3 into Glacier
- Building 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

- Led technology discussions within the lab and with communications with external partners
- 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 engineering interns 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 with their 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
- Gave tech talks on developing with blockchain and machine learning to VW engineers around the world

**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 media delivery applications using Okta, Angular 2, and Node.js

**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**

Software Engineer: Innovation Lab

Intern Software Engineer: Innovation Lab

**Ashburn, VA**

Aug 2017 - Mar 2018

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
- Spearheaded research efforts into blockchain technology and available frameworks to guide project decisioning

**Additional Projects**

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**Coldstart**

Used Python and the Click library to develop a CLI tool for rapidly creating projects through auto generating file tree structures, Readme files, testing and deployment with Travis, git hooks, and other necessary tools to enable development. Continuing to increase language coverage by researching project fundamentals for different languages and working to streamline CLI process through user testing.

**Hummingbird**

Building a tool in Python to enable developers to provide users with higher availability by implementing chaos engineering through simulated cloud failures and by presenting a rapid fallback mechanism to rotate traffic over to unaffected cloud platforms. Also integrating support for custom predictive fault models to determine when unused cloud resources should be spun up to be ready to handle incoming traffic rather than causing downtime during traffic transitions.

**Movienight**

Building a co-streaming application with Go and React 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.

**Watchlist**

Leveraging the RapidAPI Netflix Catalog API to build an Alexa skill with Python that delivers movie/TV recommendations. Continuing to add support for previously viewed content to further enhance relevant recommendations to feature only new content to the user with Memcached and PostgreSQL in AWS.