

Amir Zainali

Software Engineer, Data

amir.zainali@gmail.com | (540) 553-6117

EXPERIENCE

Co-Founder, Vertis — Jul 2023–Feb 2024

- Built entire containerized staging/production backends using FastAPI on AWS ECS and RDS (PostgreSQL) with automated CI/CD using GitHub actions and Terraform.

Senior Software Engineer, Data Platform, Turo — Sep 2021–Jun 2023

- Contributed to various data engineering infrastructure terraform scripts (EKS, Redshift, EMR S3, ..)
- Developed/optimized various pipelines using Airflow, PySpark (EMR) and SQL (Redshift).
- Integrated PagerDuty for incident management for DE team.
- Initiated staging Redshift using data-sharing as read-only to improve the overall security and performance of the production environment.

Senior Data Engineer, American Century Investments — Aug 2020–Feb 2021

- Built serverless data-lake ETL pipelines using AWS Lambda functions, step functions, DynamoDB, CloudEvents, and Athena for ad-hoc queries.
- Wrote the ingestion scripts for the transformation of JSON and fixed-length data sources to handle files that are larger than memory.

Founder, Samepage — Aug 2019–Apr 2020

- Iterated over some productivity/monitoring tools for ML/DS teams.

Staff Research Scientist, Samba TV — Jan 2019–Jul 2019

- Led the development of benchmarking process for deploying the new search algorithms into production.
- Modified the video identification search algorithm that improved the accuracy in production significantly (by more than 100% in some cases) while reducing computational cost and code complexity.

Senior Research Scientist, Samba TV — Jun 2018–Dec 2018

- Developed new Computer Vision features for the video fingerprinting algorithm and performed hyper-parameter optimization to increase accuracy.

Research Engineer, Samba TV — Jan 2018–May 2018

- Built pipelines for video fingerprinting and performing offline search simulations.
-

EDUCATION

Ph.D. in Geophysics (Computational Physics), Virginia Tech, Blacksburg, VA — 2016

SKILLS

Python, SQL, Airflow, Jenkins, Terraform, AWS, dbt, Redshift, Snowflake, Spark, FastAPI, Docker

Research—Authored and co-authored 9 peer-reviewed journal papers with more than 450 citations on different topics in the field of computational physics.

Side Project— Building data warehouse as a code based on open-source technologies DuckDB and Evidence.