

# Arsh Singh

mail@arshy.org | github.com/arsin | blog.arsin.io

## WORK EXPERIENCE

### Lead Software Engineer, State Farm Labs

04/2022 - Present

- Developing user and recommendation embeddings to optimize current matching algorithms.
- Pioneered a recommendation system written in Python leveraging FastAPI; that consumes multiple data points, explicit, and implicit feedback to provide actionable tasks for a user to take.
- Designed and developed a full-stack web application with React + Tailwind to provide insights on your home and mitigate risks on your property.
- Built platform automation tools to improve the CI workflow. Set up linting, code coverage and reduced deployment times by 50% with a custom GitLab runner. Improved build speed by ~40% migrating code base to Vite.

### Senior Software Engineer, Dialexa

05/2021 - 04/2022

- Designed an orchestrator component leveraging AWS CDK and Service Catalog, for a custom ML Ops platform that launches infrastructure in users AWS account with established roles and permissions for experimentation/ production pipelines.
- Constructed a custom SageMaker Project Template to facilitate complex orchestration with multiple stages, custom approval steps, and model monitoring.
- Improved batch data update process by developing architecture to run SageMaker notebooks on a fixed schedule with EventBridge and Lambdas.
- Demonstrated capabilities to shareholders and supported client delivery teams on top of my own time deliverables.

### Senior Software Engineer, State Farm Labs

12/2019 - 05/2021

- Programmed a machine learning metadata store, built with Javascript and GraphQL, that automatically scrapes and tracks meta-information for auditing, data versioning, lineage, and dependency trees.
- Optimized the performance of the platform using pub/sub messaging, serialization of large data with GrPC and serverless architecture written in Go, resulting in major improvement in efficiency and handling system failures.
- Created a front-end webpage and command line interface in Javascript to enable users to create, update, delete and track lineage for models.
- Established software development best practices, mentored team members, and increased efficiency and productivity within the team.

### Software Engineer II, Citigroup

05/2018 - 12/2019

- Designed a Terraform provider leveraging GoLang that enabled CRUD lifecycle operations for on premise MongoDB instances.
- Developed a load test library to simulate user activity, written in Java, that transforms Apache REST logs to JMeter test plans.
- Engineered a Spring Boot API in Java with role based access to provide better user interface to existing legacy workflow automation tooling.
- Assisted and trained site reliability team, resulting in 50% less support tickets that were escalated to the engineering team.

## EDUCATION

University of Texas at Dallas, Richardson, TX

August 2014 - May 2018

Bachelor of Science in Computer Science

## SKILLS

Languages: Python 3+, JavaScript, Golang, SQL, Swift, TypeScript, Java

Technologies React.js, Express.js, FastAPI, Node.js, Pandas, gRPC, Jest, GraphQL, Flask, SpringBoot, Tailwind CSS

Infrastructure: Amazon Web Services, Postgres, SQLite, Docker, Terraform/ CloudFormation, Kubernetes, NGINX, MongoDB