

Shivani Firodiya

New York | LinkedIn | (812)-361-6398 | me@sbfirodiya.dev | Github | Website

EDUCATION

Indiana University Bloomington, Indiana, United States

Master of Science in Computer Science

Pune Institute of Computer Technology, Pune, India

B.Engg in Computer Engineering

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, JavaScript, TypeScript, C, C++, SQL, Shell Scripting, HTML, CSS, Bash
- **Frameworks & Platforms:** Docker, Kubernetes, AWS (EventBridge, Glue, DynamoDB, S3), GCP, CI/CD, MongoDB, MySQL, Flask, Node.js, React, Next.js, FastAPI, Bootstrap, JQuery
- **Big Data & Analytics:** Apache Spark, Amazon Spektr, Glue ETL, Distributed Caching Systems, Real-time Dashboarding
- **Tools & Practices:** Git, Jenkins, Agile, SonarQube, Pytest, Playwright

WORK EXPERIENCE

Amazon, New York - Software Development Engineer - II

July 2020 - Present

- Launched **Sponsored Display** across **11 new markets**, driving **+15% advertiser adoption** within **6 months**; enabled config-driven launch for future markets.
- Re-architected a monolith into **4 microservices**, cutting **OpEx by 20%** and boosting deployment frequency to weekly.
- Cut ad-serving latency by **50%** via a high-throughput cache; achieved **90% cache hit rate** and reduced API latency by **2s**.
- Built geo-targeting (radius/city/postal code) enabling audience reach by location for advertisers not selling on Amazon, driving **32% adoption**.
- Designed and built a unified platform enabling hardware engineers to manage all parts' operations in AWS data centers from a single interface, improving efficiency and workflows.
- Collaborated on migrating ad performance analytics pipelines to **Spektr**, Amazon's unified, privacy-compliant data catalog, by implementing **Glue ETL jobs** standardizing data access and analytics.
- Delivered an **MCP server** with **Amazon Q retrieval** that auto-suggests related tickets and downstream queries, speeding incident triage and lowering L3 load.
- Automated **DynamoDB** retention via **Amazon EventBridge**-triggered **AWS Glue** jobs, deleting around **1TB/month** stale data and saving **60%** in operational costs.

VISA, Foster City, California - Sr. Software Engineer Intern

May 2019 - Aug 2019

- Built **real-time dashboards** to monitor divisional team progress, improving **manager and GTM visibility** on feature launches.
- Increased **code coverage** across the product, cutting quality issues by **80%** and enhancing long-term **maintainability**.

IBM, Pune, India - Associate Software Engineer

July 2017 - July 2018

- Migrated a legacy file-based IBM product to a high-performance **SQL database**, improving latency by **40%** and reducing operational overhead by **30%**.
- Containerized **IBM Sterling B2B Integrator (B2Bi)**, cutting team setup time and ensuring **consistent, replicable production deployments**.

IBM, Pune, India - Software Developer Intern

Sept 2016 - April 2017

- Developed a **PoC** replacing **Apache Solr** with **MongoDB** in IBM's Contract Management product, improving query performance and scalability.
- Automated workflows with **Bash** and **Python** scripting, cutting manual processing time by **60%**.

PROJECT EXPERIENCE

ParGrep

Aug 18 - Dec 18

C, POSIX Pthreads

- Developed a parallelized file search utility in C using POSIX threads; achieved 50% faster search performance compared to GNU grep.

Audio Sentiment of Telephonic Conversation

Aug 18 - Dec 18

Python, Gaussian Mixture Models, Clustering, Deep Neural Networks, RAVDESS Dataset

- Implemented speaker source separation using Gaussian Mixture Models and clustering algorithms.
- Trained a DNN model on RAVDESS dataset to perform sentiment analysis on separated audio sources.

Xodia - AI Bot Competition Platform

July 14 - May 17

Django, Python, Sandbox Security, Web Rendering

- Engineered a platform for competitive gaming between user-programmed bots, allowing real-time match viewing and automated code deployment.
- Developed a judging system with sandboxing, validation, and server-side rendering using Django for three distinct games: Enthronement, Grow, and Ensquare.

PUBLICATIONS

Don't Separate, Learn To Remix: End-To-End Neural Remixing With Joint Optimization