

Shivani Firodiya

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Education

Indiana University Bloomington

Master of Science in Computer Science

May '20

Pune Institute of Computer Technology

Bachelor of Engineering in Computer Engineering

May '17

Skills

Programming Languages:

Python, Java, C/C++, React

Machine/Deep Learning:

Scikit-learn, TensorFlow, Matplotlib, NumPy, Pandas, Pytorch, Pyspark

Back-End Programming:

Django, SpringBoot, Docker, Jenkins, Kubernetes, REST, CI/CD.

Work Experience

Software Development Engineer

July 20 – Present

Amazon, New York

- Launched Sponsored Display across 11 new markets, driving +15% advertiser adoption within 6 months; enabled config driven launch for newer markets in future.
- Re-architected a monolith into 4 microservices, cutting OpEx by 20% and boosting deploy frequency weekly.
- Cut ad-serving latency by 50% (p95 from [A] ms → [B] ms) via a high-throughput distributed cache; achieved 90% cache hit rate and reduced API latency by 2 sec.
- Built geo-targeting (radius/city/postal code) enabling audience reach by location for advertiser who don't sell on Amazon driving adoption by 32 %
- Designed and built a unified platform enabling hardware engineers to manage all part's 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.

Sr. Software Engineer Intern

May 19 - Aug 19

VISA, Foster City, California

- Gained valuable experience in transaction processing as part of the Digital Payments team.
- Developed dashboard using React for tracking real-time progress of different teams across the division.
- Improved the coverage for the whole product codebase improving code utility.

Associate Software Engineer

July 17 - July 18

IBM, Pune, India

- Investigated the pitfalls of legacy file-based installation of IBM product and replaced with database.
- Implemented a secure scalable REST assured framework to automate QA unit testing in CI.
- Containerized existing product B2bi and moved it to production level.

Software Developer Intern

Sept 16 - April 17

IBM, Pune

- Completed a PoC using MongoDB instead of Apache SOLR for IBM's product, Contract Management.
- Automated several workflows using bash scripts and python scripting in existing product.

Academic Projects

Travel Guide – Provide end to end cheapest travel plan for your trip.

Jan 19 - May 19

- Designed micro-service architecture to support functionalities like cheapest flight and cab search.
- Explored CI/CD using Docker, Jenkins, Kubernetes and service discovery using Consul.

ParGrep

Aug 18 - Dec 18

- Used pthreads in C to implement file search. Pargrep worked 50% faster than grep.

Audio Sentiment of Telephonic Conversation

Aug 18 - Dec 18

- Implemented source separation of speakers using Gaussian Mixture Models and Clustering.
- Trained a DNN model on RAVDESS dataset to perform sentiment analysis on the source separated data.

Analysis of Click Through Rate of Advertisement Data

July 16 - May 17

- Predicted the click through rate of images using CNN and Autoencoders to improve click ability and viewability.

Xodia – AI Competition between Programmed Bots

July 14 – May 17

- Xodia is a gaming competition between bots. Players submit their codebase and can see run time the match between their bot and a random bot.

- Created judging framework for the game composed of developing a sandbox, the validator and server-side rendering using Django for 3 different games viz. Enthronement, Grow, Ensquare.

Publications

[Don't separate, Learn to Remix: End-to-End Neural Remixing with Joint Optimization](#)