SHIVAM PAL

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EXPERIENCE

American Express — Phoenix, AZ, USA
Software Development Engineer — 09/2024 - Present

- Created an API for distributed merchant offers system, resolving data-recall anomalies and boosting data efficiency by 43%.
- Revamped LPM batch processing for AWS S3 transfers, increasing pipeline performance by 31%.
- Orchestrated cloud infrastructure migration, enhancing multi-framework DevOps compatibility.
- Migrated OpenTelemetry logs from Splunk to ELF and built Splunk/Kibana visualizations, improving monitoring by 27%.
- Automated data encoding and E2E testing, increasing server uptime by 28% and reducing operational costs by $600K

Arizona State University with Integrated Travel — Tempe, AZ, USA
Team Lead, Machine Learning Analytics — 07/2024 - 09/2024

- Directed an ML-driven Net-Zero transit project using SQL and R, improving predictive analytics by 19%.
- Supervised multi-source ETL pipelines, improving data accuracy by 22% and consolidating unstructured data for ML model training.
- Designed and deployed large-scale ML pipelines on Redshift, optimizing model training by 15% using Airflow.

Adani Edu. with MCMIT — CG, India
Device Usability Researcher — 01/2022 - 07/2022

- Engineered an IoT platform with Node.js and WordPress, increasing user engagement by 23% through UX-driven analytics.
- Implemented Agile workflows to streamline project development, reducing timelines by 32% while assisting in classroom sessions.
- Leveraged Identity Management, Google Cloud Analytics, improving feedback participation by 25%.

Cognizant — TN, India
Programmer Analyst — 01/2021 - 12/2021

- Optimized financial data pipelines with Kafka and Spark, achieving a 12% reduction in processing latency.
- Enhanced Azure cloud scalability, leading to an 18% improvement in micro-service deployment efficiency with Kubernetes.
- Spearheaded a cross-functional team in a Healthcare Insurer Project, enhancing Medicare data processing by 20% with Spring Boot.
- Executed a robust testing framework with Selenium & Spring Boot, improving code reliability and operational efficiency by 32%.

SKILLS

Development Tools Python, Java, SQL, Shell, C++, JavaScript, Scala, PHP, R, React, Angular, Django, Flask, Spring, Node.js, Go.
Data & Cloud CI/CD, Git, Azure, Docker, Kibana, Terraform, Jenkins, Postman, BigQuery, Databricks, Hadoop, Tensor, Keras, GraphQL.
Certifications CompTIA 2024 Security+, AWS 2024 Solutions Architect Associate, Oracle 2023 FA, IBM DSP.

PROJECTS

Rayz: AI-Powered X-ray Analysis — 11/2024 - 02/2025

- Designed an AI-powered medical assistant using deep learning models, achieving 93.44% AUROC on NIH & NLMCXR datasets.
- Accelerated inference pipeline with CUDA, vectorized NumPy, and XLA, cutting inference time by 40%.
- Devised an adaptive multithreading system for CPU-GPU load balancing, improving efficiency by 15%.
- Deployed BERT-based NLP for label extraction, fine-tuning with Optuna & Torch-TensorRT to enhance dataset annotation accuracy.

Sustaining Balance, ASU — 01/2024 - 05/2024

- Conducted a global food security analysis on 53k data points using AWS, GIS, and BI tools, uncovering insights on resource allocation.
- Employed machine learning and NLP models for sentiment analysis of policy implementation, enhancing insights by 44%.

Tryspec: Virtual Try-On System — 08/2023 - 11/2023

- Created an AR-based virtual try-on system using OpenCV and MediaPipe, enabling real-time accessory visualization.
- Integrated adaptive facial landmark detection and adaptive sizing to personalize accessory fitting.
- Administered interactive product toggling, allowing users to explore styles instantly, increasing engagement by 10%.

EDUCATION

M.S., Information Technology (Project Management) — 08/2022 - 05/2024
Ira A. Fulton Schools of Engineering, Arizona State University, AZ, USA — GPA: 4.00
Relevant Coursework: Info. Systems Development, Big Data Analysis, ML/DL, Cloud & Computer Architecture, IoT