

# Aniket Deshpande

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## SUMMARY

Data scientist with 2+ years of hands-on experience in Python, SQL and machine learning, designing modern cloud-based data pipelines and analytics products. Engineered and deployed ML models on AWS SageMaker, creating behavioral and time-series features to improve early-risk detection and predictive maintenance. Skilled in data architecture design and cross-functional collaboration to drive enterprise-level insights.

## SKILLS & CERTIFICATIONS

- **ML & AI:** PyTorch, Scikit-learn, XGBoost, Transformers (HuggingFace), LightGBM, LSTM, Statistical Analysis, Python
- **NLP & LLMs:** Text classification, Sentiment Analysis, GPT-2, Speech Emotion Recognition, BERT, meta LLaMA-2, T5
- **Data & Cloud & Architecture:** SQL Server, AWS (Sagemaker, EMR, Glue, S3, Kinesis), Azure, Apache Spark, Pandas, Data Architecture, Data Pipelines
- **Visualization & Tools:** Tableau, Matplotlib, Jupyter, Docker, Linux, Agile workflows, Git version control, CI/CD pipelines
- **Certifications & Professional Skills:** HarvardX (High Dimensional Data Analysis), IBM (Data Science Professional), AWS Certified Machine learning Specialty, Infosys Springboard (Applied NLP), Consulting Experience

## WORK EXPERIENCE

### EDPLUS at ASU

Aug 2024 - Present

#### Instructional Design Assistant

Scottsdale, AZ

- Analyzed 10K+ learner interaction events from adaptive learning and gamified modules across 15+ production courses, designing data pipelines and enabling personalization research and student engagement insights
- Engineered and validated 20+ behavioral & psychometric features and designed data architecture to support ML-based early-risk detection models, improving readiness-check quality assurance by ~30%
- Consulted with two cross-functional research and engineering teams to deploy models on AWS SageMaker and run controlled A/B experiments, leading to measurable improvements in course outcomes
- Authored end-to-end data documentation, experiment reports, and model assumptions, improving reproducibility and reducing onboarding time for new collaborators

### SUZLON ENERGY Pvt. Ltd.

May 2021 - Aug 2021

#### Data Analyst Intern

Pune, India

- Developed Python-based data pipelines and RUL predictive models on high-frequency SCADA & CMS time-series data, achieving 95% failure detection accuracy and enabling proactive turbine maintenance
- Automated anomaly detection pipelines and built Tableau dashboards to monitor turbine health and operational risk, designing underlying data architecture that reduced manual diagnostic effort by 25% and supporting data-driven decisions

## UNIVERSITY PROJECTS

### LLM-Powered NLP Web Application

- Engineered a production-ready Generative AI platform using FastAPI and Docker, delivering high-fidelity text summarization and sentiment analysis with a modular Gradio UI.
- Optimized system reliability to 100% service availability by architecting a fallback routing system that seamlessly transitions between local transformer models and OpenAI/OpenRouter APIs.
- Streamlined the deployment lifecycle via GitHub Actions CI/CD, implementing blue-green deployments and automated smoke tests to handle 500+ daily API requests with sub-second inference latency.

### Fraud Detection with Drift-Aware Evaluation

- Developed a recall-optimized fraud detection pipeline using Logistic Regression, Random Forest, and XGBoost on 280K+ transactions, achieving 83% recall on highly imbalanced data (0.17% fraud rate).
- Implemented an adaptive threshold recalibration mechanism that restored recall by ~25% on drifting data streams while maintaining a stable manual review workload of <1% of total transactions
- Evaluated SMOTE vs. class-weight rebalancing, determining that class weights provided superior precision and lower computational overhead for PCA-transformed financial features.

### Stockio: Financial Forecasting & Anomaly Detection

- Engineered an automated intelligence platform using Prophet, ARIMA, and XGBoost to deliver short-horizon price forecasts with 93% precision in anomaly detection, integrated with VADER sentiment analysis for real-time market insights.
- Architected a cache-aware data pipeline featuring forecast sanity guardrails and SHAP-based explainability, deployed via Azure DevOps CI/CD to Hugging Face Spaces to provide transparent, risk-aware visualizations for stakeholders.

## EDUCATION

### ARIZONA STATE UNIVERSITY

Aug 2024 - May 2026

M.S., Data Science, Analytics, and Engineering (Computing & Decision Analytics)

Tempe, AZ

- **GPA:** 3.8 / 4.0
- **Coursework:** Machine Learning, Statistical Modeling, Big Data Analytics, Cloud Computing

### MIT WORLD PEACE UNIVERSITY

Jul 2022 - May 2023

PG Diploma, Artificial Intelligence & Machine Learning

Pune, India

- **GPA:** 3.7 / 4.0

### MIT WORLD PEACE UNIVERSITY

Jul 2019 - May 2022

Bachelor of Computer Application, Computer Application

Pune, India

- **GPA:** 3.8 / 4.0