

# Swapnil C. Banduke

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## SUMMARY

AI/ML Engineer with **3 years** of experience designing and deploying scalable **ML models** across various industries. Proficient in **Python**, **TensorFlow**, **PyTorch**, and **AWS**. Passionate about leveraging AI to solve complex business problems

## EXPERIENCE

### Data Analyst Intern | Communities In School | Los Angeles, USA

June 2025 - Aug 2025

- Architected an end-to-end ETL pipeline using AWS (S3, **Lambda**, Glue) to process education data, automating ingestion and transformation workflows into Amazon RDS (MySQL) reducing manual effort by 60%
- Built QuickSight dashboards integrated with Amazon Q, allowing non-technical users to query data naturally—resulting in a 3x increase in dashboard engagement and cutting reporting turnaround by 40%

### Data Scientist Intern | MicroDrive | Texas, USA

Jan 2025 - May 2025

- Implemented a serverless AWS pipeline using Lambda, S3, and EventBridge to automate scheduled data extraction from Phyllo APIs, reducing manual workload by 50%
- Developed AWS Glue jobs to transform unstructured API data into structured formats, storing curated datasets in S3 and enabling ad-hoc analysis via Amazon Athena—cutting data preparation time by 40%
- Built and maintained a **Tableau** dashboard integrated with **Snowflake** and AWS Athena, enabling real-time KPI tracking and enhancing operational effectiveness by 60%

### AI Intern | Eversana | Kansas, USA

June 2024 - Dec 2024

- Designed and launched an automated Next Best Experience pipeline in AWS SageMaker, using **XGBoost** to personalize HCP outreach and drive a \$2.7M revenue increase in one quarter ([Source](#))
- Integrated **LLM** model into an automated **AWS SageMaker** recommendation engine pipeline, generating tailored insights, streamlining weekly data processing, and boosting marketing efficiency by 30%
- Built a call volume forecasting pipeline using ARIMA, SARIMAX, and Prophet for benchmarking; implemented LSTM via NeuralForecast (PyTorch Lightning) as the final model, improving forecast accuracy by 25%

### Data Scientist (Assistant Manager) | Kirloskar Brothers Limited | Pune, India

Jul 2021 - Aug 2023

- Created custom KPIs and time-based metrics using **DAX** in **Power BI**, enhancing real-time operational insights and supporting predictive maintenance and improving plant performance by 15%
- Engineered and maintained **ETL** workflows to preprocess raw data, improving pipeline efficiency and automating feature engineering, reducing processing time by 30%

## SKILLS

**Certifications:** AWS ML Engineer Associate, Microsoft Fabric Analytics Associate (DP-600), Google Data Analytics

**Programming Languages & Analytics Tools:** Python (Scikit-learn, TensorFlow, PyTorch, Keras, Matplotlib), R, SQL, PySpark, Statistical Modeling, Advanced Excel, Tableau, Power BI, Grafana

**Machine Learning & AI:** Deep Learning, NLP, RAG, Transformers, Computer Vision, Vector Databases, Fine-Tuning(LoRA, QLoRA, PEFT), LangChain, RLHF, LLM Agent Frameworks (CrewAI, AutoGen, OpenAgents)

**Frameworks & Platforms:** Streamlit, Flask, FastAPI, Spark, Keras, AWS (S3, EC2, SageMaker, SQS, Redshift, Kinesis Athena, Glue, EMR), GCP (BigQuery, Vertex AI), Azure DevOps, Hugging Face, LangChain, Spacy

**Tools & Databases:** OpenCV, Git, VSCode, Docker, Kubernetes, Pycharm, MySQL, PostgreSQL, Firebase, Hadoop

## EDUCATION

**M.S. in Business Analytics & Artificial Intelligence** - UT Dallas (GPA 3.8)

Aug 2023 - May 2025

**Coursework:** Applied LLM, Deep Learning, Time Series Analysis, Predictive & Prescriptive Analytics, Advanced Statistics

## PROJECTS

**Multi-Label StackExchange Classifier - LLM Finetuning** ([Github](#)) | (Gemma + QLoRA, Transformers, PEFT)

- Fine-tuned a Gemma 2B instruction model using QLoRA with 4-bit quantization to tag StackExchange posts with multiple topic labels, reducing GPU memory usage by ~50 % and achieving 0.82 macro-F1 accuracy

**Conversational PDF Q&A System** ([Hugging Face](#)) | (Streamlit, SentenceTransformers, OpenAI, prompt engineering)

- Deployed a PDF conversational AI enabling users to query uploaded documents in natural language and improving document analysis efficiency by 50%.

**Emotion-Based Music Recommender System** ([Github](#)) | (PyTorch, TensorFlow, Keras, OpenCV)

- Built a facial emotion recognition app by fine-tuning pre-trained models (VGG16, ResNet50) and training a custom CNN, achieved 96.6% accuracy and integrated a music recommendation engine for mood-based playlist suggestions