

# Sweety Seelam

**Email:** [sweetyseelam8@gmail.com](mailto:sweetyseelam8@gmail.com) • **Phone:** +1 (931) 252-4423 • **Location:** Michigan, USA

**LinkedIn:** [linkedin.com/in/sweetyrao670](https://www.linkedin.com/in/sweetyrao670) | **GitHub:** [github.com/SweetSeelam2](https://github.com/SweetSeelam2) | **Medium:** [@sweetyseelam](https://medium.com/@sweetyseelam) |

**Portfolio:** [sweetyseelam2.github.io](https://sweetyseelam2.github.io) | **Streamlit Apps:** [share.streamlit.io/user/sweetyseelam2](https://share.streamlit.io/user/sweetyseelam2)

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## Professional Summary

- Business Analyst and Aspiring Data Scientist with 5 + years of experience driving data-driven growth for global organizations including Amazon.
  - Proficient in SQL, Python, A/B testing, Causal inference, LLMs, NLP, Deep Learning models, Machine learning with a focus on experiment design, AI product development, and storytelling through data (dashboards such as Tableau and Power BI).
  - Active participant in Kaggle & Devpost competitions (ARC Prize 2025, Trojan Horse Hunt, Tableau Next, GKE Hackathon, Red-Teaming OpenAI GPT-20b).
  - Currently pursuing an Executive Master's in Data Science with specialization in ML and AI.
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## Technical Skills

**Languages:** Python, SQL, R

**ML / AI:** ML Algorithms, TensorFlow, PyTorch, Scikit-learn, BERT, LLMs (Phi-2, Llama 3), NLP, Regression, Recommendation systems, Predictive Modeling

**Explainability & Causal:** SHAP, LIME, Propensity Score Matching, Uplift Modeling, A/B Testing, Causal Inference, Hypothesis Testing

**Visualization & BI:** Tableau, Power BI, Streamlit, Excel

**Cloud & API Dev:** FastAPI, Railway, GKE, Hugging Face Spaces, GitHub

**Big Data & Engineering:** ETL, Data Warehousing, CTEs, Window Functions

**Business Domains:** Marketing Analytics, Forecasting, Customer Segmentation, Fraud Detection, Healthcare

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## Professional Experience

### Professional career break – Pursuing Master's in Data Science

*University of the Cumberland | 2024 – Present | Kentucky*

- Developed Retrieve-Rank-Explain LLM driven Recommendation system using Phi-2 and Llama that lifted user interaction by 20%.
- Deployed XGBoost + SHAP/LIME models for churn and fraud prediction, adding \$1.2 M in annual CLV impact.
- Built and scaled A/B testing frameworks that cut deployment cycles by 20% and drove 5–7% uplift in key engagement metrics.
- Conducted causal inference studies on pricing changes, resulting in a 15% margin increase.
- Engineered an NLP-powered sentiment analysis model using BERT, enhancing customer feedback interpretation accuracy by 25%.
- Applied Deep Learning (CNN + Transfer Learning) techniques for product image classification, achieving 90%+ accuracy and improving model explainability with LIME.

### Business Analyst

*Agile IT Services | 2024 | Michigan*

- Led experimentation pipelines to evaluate product strategies, driving a 15% increase in conversions.
- Developed ML models for personalized recommendations, improving engagement by 20%.

### Business Analyst II

*Amazon | 2021 – 2024 | Michigan*

- Integrated Python-SQL pipelines reducing manual reporting by 300+ manual hours/year; Power BI/Tableau dashboards reducing manual reporting time by 50%.

- Collaborated with PMs and Engineers to define experimentation KPIs, speeding feature launches by 15%.

### EHS Specialist

*Amazon | 2019 – 2021 | Kentucky*

- Built interactive financial dashboards in Power BI that increased visibility into a \$500 K+ department budget and reduce monthly reporting errors by 25%.
- Combined data from multiple internal systems with advanced SQL queries to automate Tableau incident-analysis reports, reducing data-retrieval time by 30%.

### Research Volunteer

*Western Kentucky University | 2019 | Kentucky*

- Statistical data analysis and hypothesis testing to identify key insights from large datasets.
- Automated recurring reports using SQL & ETL workflows, reducing manual workload by 40%.

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### Education

- Executive Master's in Data Science, *University of the Cumberland*s (2024 – 2026)
- Executive MBA in Business Data Analytics, *Ottawa University* (2022 – 2024)

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### Certifications

- Microsoft Power BI Data Analyst
- Tableau Business Intelligence Analyst

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### Key Projects & Competitions

Project	Description	Tools
<i>Fraud Detection with Explainable AI</i>	XGBoost + SHAP model deployed via Streamlit for real-time risk scoring.	Python, XGBoost, Streamlit
<i>LLM Retrieve-Rank-Explain Recommender</i>	LLM (Phi-2, Llama 3) with SHAP insights on Hugging Face.	RAG, LLM, Hugging Face
<i>Netflix Revenue Predictor</i>	ROI forecast model with SHAP + Tableau dashboard.	XGBoost, Tableau
<i>CancelSense API</i>	Real-time flight delay API via FastAPI + SHAP on Railway.	FastAPI, Railway
<i>Trojan Horse Hunt (Kaggle competition)</i>	Backdoor model detection pipeline for ML security.	Python, NumPy
<i>Red-Teaming Challenge (OpenAI gpt-oss-20b) (Kaggle competition)</i>	LLM safety evaluation and behavior probing.	LLM Eval, AI Safety
<i>Tableau Next (Devpost competition)</i>	Agentic KPI Concierge dashboard unifying churn & ROI metrics.	Tableau Next Gen
<i>ARC Prize 2025 (Kaggle competition)</i>	Multi-solver reasoning framework for abstract generalization.	Meta-Learning, AI Reasoning

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### Affiliations

- Member - Project Management Institute (PMI)
- Member - International Institute of Business Analysis (IIBA)
- Member - Institute of Electrical & Electronics Engineers (IEEE)
- Member - Society of Women Engineers (SWE)