DEBADRI SANYAL

West Lafayette, IN | 912-809-1724 | sanyald@purdue.edu | http://www.linkedin.com/in/debadri-sanyal-81b931150

PROFILE

Data Science professional with 3 years of experience building scalable ETL pipelines and predictive models within the Technology, Finance, and Healthcare sectors. Specialising in Advanced Machine Learning, Statistical Modelling, and Big Data Architecture. Expert in Python, SQL, and ML/DNN. Automating complex data workflows and implementing ensemble learning techniques to drive a 25-35% increase in operational efficiency. Passionate about leveraging quantitative analysis and AI to transform raw data into high-impact business decisions

Skills: Proficient in Python, Deep Learning, ML regression/classification, LLM, RAG, Scikit-Learn, Pandas, NumPy, Matplotlib, Seaborn, NLP, Langchain, Data Wrangling, Feature Engineering, Model Evaluation, Statistical Analysis, Time-series forecasting, hypothesis formulation, Ensemble models, SQL, ETL, Hive, Hadoop

Certifications: Datacamp Associate Data Scientist, Al-900: Microsoft Azure Al Fundamentals, Datacamp Python Data Fundamentals, Datacamp SQL Fundamentals, SAS AI-foundations-knowledge-badge, SAS-SQL-Essentials-knowledge-badge, AWS Cloud Practitioner

EDUCATION

Purdue University, Daniels School of Business — **West Lafayette, IN**
Master of Business Analytics and Information Management, GPA: 3.8/4.0 — **December 2026**

Vellore Institute of Technology — **Vellore, Tamil Nadu, India**
B.Tech Electronics and Instrumentation Engineering, GPA: 3.5/4.0 — **June 2022**

ACADEMIC PROJECTS

PURDUE University, Datacamp Data4Good Competition — **West Lafayette, Indiana**
AI Factuality Detection | NLP & Ensemble Learning — **November 2025 - January 2026**

- Developed a Weighted Soft-Voting Ensemble (HistGradientBoosting and Random Forest) to detect AI "hallucinations" in educational content, achieving a 93.54% Macro-AUC by integrating semantic similarity and dual-vectorization feature engineering. project ensures educational integrity by providing a scalable framework to statistically validate factuality of AI-generated responses against provided source contexts.

PURDUE University, Mitch Daniels School of Business — **West Lafayette, Indiana**
Bankruptcy Prediction System | ML & Ensemble Optimization — **October 2025 - December 2025**

- Engineered a Bankruptcy Prediction System achieving 91.7% AUC by deploying an optimized XGB/LGBM ensemble, utilizing SMOTE for class imbalance and L1/L2 regularization to ensure model robustness and feature selection across high-dimensional financial datasets.

PURDUE University, Mitch Daniels School of Business — **West Lafayette, Indiana**
Computer Price Dynamics Analysis | Exploratory Data Analysis — **August 2025 - October 2025**

- Analyzed 100,000 computer systems operating Python (Pandas, NumPy) and hypothesis testing to statistically validate impact of technical specs on market valuation, translating these insights into tiered pricing models and brand positioning strategies for product lifecycle optimization.

PROFESSIONAL EXPERIENCE

Google (Capstone Project) — **West Lafayette, Indiana**
AI/ML Engineer - Graduate Consulting Project — **January 2026 - May 2026**

- Led AI-powered content strategy platform development for YouTube creators in Google-sponsored consulting engagement. Architected ML pipeline using BERTopic and GPT-4 API analyzing 500-1,000 channels, built production Streamlit dashboard delivering personalized video strategies, and managed bi-weekly stakeholder presentations translating NLP analytics into actionable business recommendations.

Deloitte USI — **Hyderabad, Telangana, India**
Data Analyst / ETL Engineer — **September 2022 – August 2025**

- Architected automated Python ETL pipelines synthesizing healthcare datasets (25% efficiency gain) and orchestrated 100+ workflows via Tidal/Control-M across 10 units (35% latency reduction). Developed high-performance SQL validation frameworks using CTEs and Window Functions (30% faster verification) while managing cross-functional bottlenecks via Jira, earning Rising-star Award.