

Priyanka K

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Profile

Motivated Data Science graduate with hands-on experience in Machine Learning, Deep Learning, NLP, and Generative AI. Proficient in Python, SQL, and modern data frameworks to build scalable predictive models, intelligent analytics pipelines, and insight-driven solutions. Strong focus on real-world problem solving through data engineering, advanced modeling, and business-oriented decision support.

Education

Christ University — MSc in Data Science (**GPA: 3.76 / 4.0**) 2024 – 2026
St. Clare's Autonomous College — BSc in Computer Science and Statistics (**CGPA: 9.1 / 10**) 2021 – 2024

Experience

NLP Research Intern, Central University of Tamil Nadu *Manuscript under review*

- Proposed an adaptive QA evaluation metric by optimizing five scoring measures **BERTScore**, **BLEU**, **Entailment**, **Perplexity**, **Contrastive Penalty** using Genetic Algorithm and Grey Wolf Optimizer on SQuAD v2.0.
- Improved alignment with human judgment by **15.7%** and achieved **3.3×** faster optimization using GWO; implemented the full Python pipeline with Hugging Face.

Projects

- QADS – Question Answering Chatbot for Data Science Learners** [GitHub](#)
 - Built a production-ready Retrieval-Augmented Generation (RAG) chatbot using FastAPI, LangChain, Pinecone, and Cohere embeddings to deliver grounded answers in the Data Science domain.
 - Integrated Groq LLM for low-latency inference with domain-first retrieval and SerpAPI web-search fallback; deployed the system on Render with a modular backend.
- Retail Customer Purchase Behavior Analysis** [GitHub](#)
 - Built an end-to-end retail analytics pipeline using **Python**, **PostgreSQL** to analyze customer purchase behavior, revenue trends, discounts, subscriptions, and shipping preferences.
 - Designed an interactive **Power BI** dashboard with customer segmentation (New, Returning, Loyal), enabling insights into top-performing products, high-value customer groups, and data-driven marketing decisions.
- Credit Card Risk Analysis** [GitHub](#)
 - Built a Logistic Regression-based credit default prediction model using customer demographic, income, and debt features.
 - Performed EDA and model interpretation to identify key risk drivers such as debt-to-income ratio, employment stability, and repayment behavior for data-driven credit decisions.
- Autonomous Data Quality Guardian for Enterprises** [GitHub](#)

Designed an autonomous, Dockerized data quality monitoring system that ingests multi-source data, evaluates quality metrics, and applies agentic reasoning to trigger automated or human-in-the-loop actions in real time.

Skills

Programming Languages: Python, R, SQL

ML/DL Frameworks: TensorFlow, PyTorch, Hugging Face, Scikit-learn, Keras

Analytics: IoT Analytics, Big Data Analytics, Geospatial Analytics, AWS

Visualization: PowerBI, Matplotlib, Seaborn, Excel, QGIS

Databases & Tools: PostgreSQL, MongoDB, MySQL

Statistical Analysis: Hypothesis Testing, Regression Analysis, Probability, Time Series Analysis, Biostatistics

Core Competencies: Analytical Problem-Solving, Strategic Thinking, Effective Communication, Cross-functional Teamwork, Leadership, Adaptability, Continuous Learning

Certifications

1. PowerBI – Udemy (2025) [Certificate](#) | 2. Participated in the **India Sustainability Startathon 2025** [Certificate](#)

Leadership and Extracurricular Activities

- Chapter Secretary, IEEE Christ University
- Media Team Member – SDG Initiative and Volleyball Player