# PRABHAKARAN PALANIMUTHU

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*An analytics engineer with close to three years' experience in enabling realized impact across projects at enterprise scale.*

## EDUCATION

**Indiana University Bloomington**                                                                                                  **Aug 2025-May 2027**
*Master of Science in Data Science, CGPA: 4.0/4.0*                                                                      *Bloomington, Indiana*
- Coursework – Intro to Stats, Applied ML, Applied Database Technologies, GenAI 101, Fund & App of LLMs, Usable AI

**Anna University (SSN College of Engineering)**                                                                                      **2018-2022**
*B.E. in Civil Engineering, CGPA: 8.2/10*                                                                                             *Chennai, India*

## PROFESSIONAL EXPERIENCE

**Data Analyst - LatentView Analytics Ltd., Chennai, India**                                                        **Sep 2022 – July 2025**
- Developed and managed comprehensive **Power BI** and **Tableau** dashboards from SQL tables to track and analyze marketing campaign performance and paid media trends across various channels including Search Paid, using KPIs and other metrics, which enabled **weekly optimizations** worth **10% of a week's revenue**.
- **Generated insights** and analyzed the weekly revenue dip by conducting **root-cause analysis** and executing SQL queries in **Databricks**, uncovering pricing inconsistencies that led to a targeted pricing adjustment and helped stabilize revenue.
- Case Study on Ad Click Through Rate prediction, by establishing an **EDA** and building multiple **classification models** to present the influencing features for increasing **CTR** based on the best-proven model.
- Performed **A/B and Hypothesis testing** to compare the campaigns and tactics through results from statistical tests such as **Z-test and T-test**. Also enabled **20% YoY revenue growth** for a seasonal offer window of the client's product.
- Developed a **SQL pipeline** in **Databricks** using PySpark and Spark SQL to transform raw data through **ETL** (Extract, Transform, Load) into a unified source and used it to build and update Power BI/Tableau dashboards, which provide data-driven insights over the performance of regional and new campaigns and creatives across **Full Funnel and Bottom Funnel**.
- **Automated an Excel report** delivery directly through mail to the stakeholder from SQL query in Databricks, automation of several Business-as-Usual reports for auto weekly refresh through **ODBC**, which resulted in saving **2 hours** of time per day.
- Generated weekly reports from **RStudio** and dashboard migration from **Hive to Databricks** for both Power BI and Tableau. Also worked initially in Hive environment before Databricks for all Data operations.

## PROJECTS

**Exploration and Fine Tuning of LLMs as a local ecosystem -** Ongoing research project associated with a faculty from Indiana University's Kelley School of Business.

**Fourier Sine Wave Visualizer -** Browser-based visualizer performs a Fourier Transform on your audio file using Python (Flask + librosa + scipy), then animates the individual sine wave components in sync with playback. [Link]()

**Predictive Modeling for Powerlifting Performance Using Regression ML techniques -** Predict powerlifting performance metric based on athlete characteristics and training data, with an average prediction error as low as 2.7%. [Link]()

**Multi-class classification using Softmax, SVM, RF, Ensemble and their evaluation -** In-depth comparison of classification algorithms with hyperparameter tuning on the Dry Bean Dataset, with an average test F-1 score of 93%**.** [Link]()

**Dimensionality reduction, clustering and generative modeling of image data -** This project demonstrates comprehensive techniques for analyzing image data through dimensionality reduction (PCA, t-SNE, LLE, UMAP), clustering (K-Means, GMM) and generative modeling (GMM). [Link]()

**Canal Discharge Prediction Using Time Series Analysis and Neural Networks (UG Project) -** Adopted ML techniques to predict the water discharge in Thevara – Perandoor canal using a historical rainfall dataset. Leveraged models such as SARIMA, as well as neural networks such as LSTM, SANN and FNN. [Link]()

## CERTIFICATIONS

- NVIDIA Certified Associate Generative AI LLMs, by NVIDIA. [View Certification]()                              **October 2024**
- Databricks Certified Data Engineer Associate, by Azure Databricks. [View Certification]()                       **August 2024**

## TECHNICAL SKILLS

*Languages & Tools:* Python, SQL, R, Power BI, Tableau, Adobe Analytics, MS Excel, JupyterLab, VS Code, GitHub, Databricks, Hive, Azure Blob Storage, Colab, Snowflake, Spark SQL, LM Studio, Anything LLM, Ollama.
*Tech & Concepts:* Machine Learning, LLMs, Generative AI, PySpark, Apache Spark, Delta Lake, Lakehouse, Delta Live Tables, Data Pipelines, ETL, Agentic AI, Chatbots, Excel VBA, Data Visualization, Data Analysis, Business Intelligence, Dashboard Development

## ACHIEVEMENTS & EXTRACURRICULAR

- Received the **Encore Award** from **LatentView Analytics Ltd**. For outstanding performance in April-July 2024
- Toastmasters' member and Active participant in **Corporate Social Responsibility (CSR)** activities at LatentView