

Research Analyst – India

Analytical and motivated Data Analyst with a strong foundation in machine learning, data preprocessing, and business intelligence. Experienced in applying statistical and predictive modeling techniques to real-world datasets across insurance and engineering domains. Skilled in tools like Python, SQL, Excel, Power BI, and proficient in building end-to-end data solutions—from data wrangling and feature engineering to model development and performance evaluation. Demonstrated ability to contribute to both client-oriented solutions and research-based innovations, with multiple IEEE publications and active involvement in reserve modeling projects.

Insurance Reserve Prediction – RBNS & IBNR

- Working on building machine learning model that estimate reserves for both RBNS and IBNR claims, focusing on enhancing accuracy in claim reserving through predictive modeling.
- Developed frequency and severity models to estimate claim-level reserves using historical policy and claims data.
- Integrated reporting and settlement delay predictions to improve accuracy in IBNR and RBNS estimation.
- Currently adapting the framework for real-world datasets involving multiple transactions per claim, improving robustness for practical applications.

Power Quality Disturbance Classification (*IEEE SCEECS 2024*— Published Research Paper)

- Designed a machine learning system for classifying power quality disturbances in electrical networks using time-frequency analysis.
- Leveraged Stockwell Transform for feature extraction and applied supervised learning techniques to identify distinct disturbance types.
- Achieved over 90% + accuracy across multiple models, showcasing practical use cases in power system stability and diagnostics.
- Research findings were published and presented at the IEEE SCEECS 2024 conference.

PQD Detection using Supervised Learning (*IEEE ICMICA 2024* – Published Research Paper)

- Developed a supervised learning framework to detect and classify nine types of power quality disturbances caused by power electronics and renewable integration.
- Employed Linear Discriminant Analysis (LDA) for dimensionality reduction and improved model interpretability.
- Evaluated six machine learning algorithms and validated the method's effectiveness across multiple classification metrics.
- Presented the research at IEEE ICMICA 2024, demonstrating its relevance to smart grid reliability.

Car Resale Value Prediction (*Predictive Analytics*)

- Created a regression-based predictive model to estimate the resale value of used cars based on various features.
- Implemented a Random Forest model and conducted thorough data cleaning, preprocessing, and feature engineering.
- Identified critical factors affecting car pricing, including brand, fuel type, mileage, and transmission.
- Gained hands-on experience in working with real-world datasets and deriving actionable insights for pricing strategy.

Key Skills : Python, SQL, Excel, Git, LaTeX. Data Visualization: Power BI (Foundational Proficiency), Matplotlib, Seaborn , Machine Learning: Supervised Learning, Regression, Classification, Model Evaluation, Libraries & Frameworks (Scikit-learn, XGBoost, Pandas, NumPy, Statsmodels etc.)

Core Competencies: Data Analysis & Preprocessing, Predictive Modeling & Feature Engineering, Strong Communication & Presentation Skills, Research & Documentation, ETL Processes, Problem Solving & Critical Thinking

Academic Qualifications:

B.Tech – Electrical and Electronics Engineering

ABES Engineering College, Uttar Pradesh

2020 – 2024