SAYONY CHAKRABORTY

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Portfolio: sayonys-portfolio.vercel.app

Objective: Data Analyst with hands-on experience in workflow automation, SQL-based reporting, and applied machine learning. Completed a 5-month internship at Goldfinn Technologies, where I automated reporting pipelines and supported data-driven operational decision-making. Strong foundation in time-series forecasting, model evaluation, and analytics-driven business insights. Seeking to contribute to AI and analytics consulting initiatives within a dynamic, data-focused environment.

PROJECTS

- **API Testing & Documentation – Docs: https://bit.ly/4miiB8f**

- **Titanic Survival Prediction – Machine & Deep Learning – (Scikit-Learn, PyTorch, Streamlit)**
  Built a machine learning and deep learning model to predict Titanic passenger survival using Scikit-learn (Decision Tree) and PyTorch (Neural Network).
  GitHub : https://github.com/sayonyyy/titanic-survival-prediction

- **Trade Forecasting (2025) – Linear Regression & ARIMA – (Pandas, Scikit-Learn, Statsmodel)**
  Developed a trade forecasting model using UN Comtrade data, applying Linear Regression for trend analysis and ARIMA for time-series patterns to generate reliable import–export forecasts for 2025.
  GitHub : https://github.com/sayonyyy/trade-export_import

- **Interpretable Retail Demand Forecasting – (Python, XGBoost, Random Forest, SARIMA, SHAP, Pandas)**
  Developed a complete time-series retail demand forecasting system using statistical and machine learning models on weekly Walmart-style sales data. Transformed the raw time series into a supervised ML format by engineering lag features, rolling averages, and seasonal indicators. Evaluated Naive, Linear Regression, Random Forest, XGBoost, ARIMA/SARIMA models using RMSE, MAE, and MAPE — with XGBoost delivering the best time-series predictive performance. Applied SHAP interpretability to explain model behaviour, revealing strong short-term autocorrelation and seasonal demand patterns, enabling inventory planning insights.
  GitHub : https://github.com/sayonyyy/Interpretable-Retail-Demand-Forecasting-Using-Statistical-ML-Models

- **Patternova – ML-Based Kolam Generation Backend — (Python, PyTorch, OpenCV)**
  Developed an ML-powered backend for generating Kolam patterns from dot inputs, combining OpenCV-based dot detection with a U-Net image-to-image model. Included a full training and inference pipeline, data augmentation, grid alignment, and SVG-based stroke generation for smooth, vectorized outputs.
  GitHub: https://github.com/sayonyyy/art_kolam

- **Singer Portfolio Website – Client Project – (HTML, CSS, JavaScript, Responsive Design)**
  Built a responsive portfolio website for a professional singer.
  Live: http://arbaaz-hossain.vercel.app | GitHub: https://bit.ly/3GQMmxF

ACADEMIC QUALIFICATION

- **B.Sc. in Data Science: Techno India University – 2027 (Pursuing)**
- **Class 12 (ISC): St. Paul's Boarding & Day School – 2023**
- **Class 10 (ICSE): St. Paul's Boarding & Day School – 2021**

Relevant Coursework: Operations Research, SQL, Machine Learning, Python, Probability & Statistics.

EXPERIENCE

Data Analyst Intern — Goldfinn Technologies (Sep 2025 – Feb 2026)
- Designed and automated Python + MySQL workflows using n8n for internal reporting and data processing.
- Performed API testing using Postman and created clean API documentation for internal integration.
- Generated recurring performance and operational reports for product and business teams.
- Analysed dataset patterns to support product decision-making and improve internal processes.
- Collaborated with the engineering team to validate workflows, fix integration issues, and ensure data quality.

TECHNICAL SKILLS

- **Languages:** Python, SQL, Java, R, HTML, CSS, JavaScript
- **Python Libraries:** Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, PyTorch
- **Tools & Technologies:** Git, GitHub, n8n, Vercel, Power BI, MS Office, MongoDB, Postman, Swagger
- **Concepts:** Data Analysis, API Testing & Documentation, Machine Learning, Web Development, UI/UX Basics
- **Operations Research:** Linear Programming, Assignment Problems, Transportation Models, Network Analysis