Tamal Majumdar

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EDUCATION

B. P. Poddar Institute of Management & Technology — Kolkata, India

Bachelor of Technology(B.Tech.) in Information Technology; GPA(till 6th sem): 7.5/10 — **October 2022 – Present**

CHITTARANJAN HIGH SCHOOL(ENG MEDIUM)
CHITTARANJAN DESHBANDHU VIDYALAYA(BENG MEDIUM) — Kolkata, India

Grade XII (WBCHSE); Score: 88.2%
Grade X (WBBSE); Score: 88.71% — **Jan 2014 – March 2021**

SKILLS SUMMARY

- **Languages:** Python, SQL,
- **ML & Data Science**: Machine Learning (Regression, Classification, Ensemble Methods), Feature Engineering, Model Evaluation & Deployment
- **Libraries:** Pandas, NumPy, Matplotlib, Seaborn, Plotly
- **Frameworks & Tools**: Streamlit, Git, GitHub, Jupyter Notebook, Tensorflow, Tensorflow lite
- **Concepts**: Object-Oriented Programming (OOP), SDLC, Software Testing & Debugging, Technical Documentation, Data Structures & Algorithms, Agile Methodology
- **Data Handling**: Exploratory Data Analysis (EDA), Data Cleaning, CSV/Excel Processing, Data Transformation, Visualization & Insights

PROJECTS

Gold Price Prediction (Machine Learning Model | Link | Code — **May 2025 – June 2025**

- Built a machine learning model to predict gold prices using financial indicators (SPX, USO, SLV, EUR/USD) with Random Forest Regressor.
- Conducted exploratory data analysis (EDA), feature correlation study, and statistical visualization using **Pandas, Matplotlib, and Seaborn**.
- Achieved strong prediction performance (**R^2 Score ~0.98**) by fine-tuning the model on historical datasets.
- Converted the notebook into a full-fledged **Streamlit web app**, enabling interactive data visualization, model evaluation, and real-time price predictions from user inputs.

TextAnalyzer-Pro (Text Analysis Tool) | Link | Code — **April 2025 – May 2025**

- Built an interactive **Streamlit app** for text analysis with real-time user input support.
- Implemented **word and sentence count** functionality to quantify text length and structure.
- Developed **keyword frequency extraction** to identify the top 5 most frequent words.
- Integrated **sentiment analysis** using `TextBlob` to classify text as Positive, Negative, or Neutral with polarity score.
- Added **readability scoring** via `textstat` (Flesch Reading Ease) to measure text complexity.

Heart Disease Prediction System | Code — **August 2025**

- Developed a **machine learning-powered web application** that predicts the presence of heart disease using patient medical attributes.
- Implemented **Logistic Regression** with optimized hyperparameters, achieving strong accuracy on both training and test sets.
- Designed an interactive **Streamlit interface** with navigation (Home, Predict, About), enabling users to enter patient data and receive instant predictions.
- Performed **exploratory data analysis (EDA)** and visualized dataset insights (distribution, class balance, and feature impact).
- Packaged the model for deployment on **Streamlit Cloud**, making it accessible for real-time usage.

CO-CURRICULARS

- **Web Developer** at **TechStorm'24** (Annual College TechFest) – March 2024
- Volunteer Lead at **TechStorm'24 (Annual College TechFest)** – March 2024
- Winner at **Tech Enquesta 2.23 (Intra-college Technical Quiz, IEEE)** – November 2024
- Secured **Rank 26 out of 250+ participants** in **CodeBee (Inter-college Coding Competition at BPPIMT)** – 2024