JAYESH PATIL

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LinkedIn | **GitHub** | **Portfolio**

OBJECTIVE

Aspiring Machine Learning Engineer with a solid foundation in Python, Scikit-Learn, and data analysis. Experienced in building predictive models and delivering real-world AI solutions. Eager to contribute to impactful, data-driven projects in a fast-paced tech environment.

EDUCATION

Bachelor of Engineering in Computer Engineering

Bharati Vidyapeeth College of Engineering, Navi Mumbai, Maharashtra

Graduation: May **2024**

SKILLS SUMMARY

- **Programming**:   Python, SQL, Git
- **ML Frameworks**:   scikit-learn, XGBoost, Feature Engineering, Model Evaluation, Cross-Validation
- **Data**:   Pandas, NumPy, Power BI, Matplotlib, Seaborn
- **ML Techniques:**   Classification, Regression, Clustering, Feature Engineering
- **Tools**:   Jupyter Notebook, Visual Studio Code, Git
- **Soft Skills**:   Problem Solving, Communication & Interpersonal Skills, Analytical Thinking, Continuous Learning

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PROJECTS

Cyber Malware Detection using ML | GITHUB | Jan 2023- Feb 2024
- o   **Tools Used:** Python, Scikit-Learn, Random Forest, Pandas, NumPy
- o   Designed and implemented a **ransomware detection model**, improving **accuracy to 99.01%** using **Random Forest.**
- o   Implemented **feature selection** (Gain Ratio, Chi-Squared, L1/L2 regularization) to enhance detection accuracy.
- o   Conducted **dynamic & static analysis** for dataset collection and preprocessing.
- o   Evaluated performance using **precision, recall, and confusion matrix**.

SPI – Student Performance Insights | GITHUB | May 2025 – June 2025
- o   **Tools Used:** Python, Pandas, Seaborn, Matplotlib, Scikit-Learn, XGBoost
- o   Collected and cleaned a Kaggle dataset of 1000+ records; performed detailed **EDA**, including missing value treatment, outlier detection, and categorical analysis.
- o   Engineered features (e.g., **total/average scores**), applied **OneHotEncoding** and **StandardScaler**, and split data for training/testing.
- o   Trained regression models (Linear Regression, Random Forest, XGBoost, KNN, Decision Tree); selected **Linear Regression** achieving **88% R² score.**
- o   Delivered actionable insights on **socioeconomic factors** affecting student performance via **visualizations** and model interpretation.

Customer Flight Booking Prediction – British Airways | GITHUB | July 2025
- o   **Tools Used:** Python, Scikit-Learn, XGBoost, Pandas, Matplotlib, Seaborn
- o   Conducted exploratory data analysis on airline booking data to uncover customer behavior patterns.
- o   Developed and compared **classification models** (Random Forest, Gradient Boosting, XGBoost), optimized using **GridSearchCV**.
- o   Visualized **feature importances**, **ROC curves**, and **confusion matrices** to interpret model insights.
- o   Delivered **actionable insights** to support **customer-centric business strategies**.

Credit Card Fraud Detection using Scikit-Learn and Snap ML | GITHUB | July 2025
- o   **Tools Used:** Python, Scikit-Learn, IBM Snap ML, Pandas, NumPy
- o   Built a **binary classification system** to detect fraud in **2.8M+ credit card transaction records**.
- o   Performed **data preprocessing** (normalization, scaling, train-test split) to enhance model performance.
- o   Used Decision Trees and SVM with **Scikit-Learn** and **IBM Snap ML**, achieving up to **4.3x faster training**.
- o   Handled **class imbalance** via **sample weighting**; achieved **ROC-AUC scores** of **0.96+** (DT), **0.98+** (SVM).

ACHIEVEMENTS & CERTIFICATES

Data Science & Machine Learning | CERTIFICATE | July 2025

BCG – Data Science Virtual Experience Program (Forage) | CERTIFICATE | July 2025

IEEE Presentation | CERTIFICATE | December 2023