Saumil Upadhyay

Full Stack Developer — Data Scientist — Software Engineer

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Education

Indian Institute of Information Technology, Sonepat **2022 – 2026**
B.Tech in Computer Science Engineering *Haryana, India*

Technical Skills

Languages: Python, Java, JavaScript, C/C++, SQL, Golang
Web/Frameworks: React.js, Node.js, Express.js, Flask, Bootstrap, TypeScript, Next.js, TailwindCSS, HTML, CSS
Databases: PostgreSQL, MongoDB, SQLite, MySQL
Tools: Git, GitHub(Open Source), VS Code, PyCharm, Postman, Render, Jupyter, JWT, REST APIs, Linux
Practices: Agile, API Design, CI/CD, SDLC, Debugging, Deployment

Relevant Coursework

- Data Structures
- Software Methodology
- Algorithms Analysis
- Database Management
- Artificial Intelligence
- Machine Learning
- OOP
- Data Science
- Operating Systems

Achievements

Secured **95.6%** in 12th Grade (PCM), ranked in top 1%.

Scored **97.44 percentile** in JEE Mains with AIR **23,256** among 1M+ candidates.

Projects

Personal Finance Tracker (GitHub) | (Live Demo) | *Next.js, TypeScript, MongoDB, TailwindCSS* **Jul 2025**

- Built a full-stack finance dashboard to manage over **10+ spending categories** and **1000+ transactions** with real-time insights.
- Integrated **MongoDB** with dynamic REST APIs using `app/api` routes in the Next.js **App Router**.
- Designed a responsive dashboard with **12+ interactive Recharts** for tracking trends, category budgets, and cash flow.
- Implemented smart budgeting logic with alert tiers: **Under Budget (<80%)**, **At Risk (80–100%)**, and **Over Budget (>100%)**.
- Deployed on **Vercel**; optimized API response times by **35%** through lean database queries and client-side caching.

Customer Churn Prediction System (GitHub) (Report) | *Flask, React.js, XGBoost, SHAP* **Mar 2025**

- Built a machine learning pipeline using XGBoost and SHAP achieving **83.89% accuracy**, **67.63% precision**, **75.40% recall**, and **89.95% AUC**, enabling high-confidence churn prediction.
- Deployed model as a Flask REST API, integrated with a JWT-secured React.js dashboard visualizing churn risk, segments, and probability trends.
- Calibrated optimal threshold (**0.54**) to balance false positives and negatives; identified **135 false positives** as acceptable for capturing high-risk customers.
- Explained churn drivers using SHAP; probabilities spanned **2%-to-73%**, aligning well with real-world interpretability.

Certifications & Courses

JPMorgan Chase & Co.: Quantitative Research Simulation (Forage) | Certificate Link **Jul 2025**

- Analyzed a portfolio of loans to estimate customer default probabilities using quantitative research techniques.
- Applied dynamic programming to convert FICO scores into categorical risk buckets for predicting loan defaults.

Lloyds Banking Group: Data Science Job Simulation (Forage) | Certificate Link **Jul 2025**

- Built a churn prediction model using random forest (ROC-AUC: **0.82**) with GridSearchCV for hyperparameter tuning.
- Performed advanced preprocessing and feature analysis using pandas, scikit-learn, and matplotlib to generate actionable insights.

Quantium: Data Analytics Job Simulation (Forage) | Certificate Link **Jun 2025**

- Analyzed customer transaction data to extract insights and deliver commercial recommendations.
- Identified benchmark stores for uplift testing and created strategic reports for category planning.