KRUSHIL MODI

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SUMMARY

MSc student in Big Data Analytics & AI at St. Xavier's College, Ahmedabad, with a growing body of project work spanning physics-informed deep learning, applied machine learning, and full-stack development. Comfortable moving between model building and production engineering, with a particular interest in data engineering and turning research-style work into something usable. Looking for a Data Engineering, AI/ML, or Software Development role to start building real-world impact.

TECHNICAL SKILLS

ML / Deep Learning	PyTorch, Scikit-learn, PINNs, XGBoost, Random Forest, SVM, KNN, K-Means
Data Engineering	Pandas, NumPy, Google Earth Engine, ETL, EDA, Feature Engineering
Web & Backend	React.js, Node.js, Express.js, Django, FastAPI, REST APIs, MongoDB, MySQL
Languages	Python, Java, JavaScript, SQL, C++
Tools	Git, Docker, Streamlit, Postman

PROJECTS

Mitigating Urban Heat & Enhancing Cooling Strategies through Deep Learning

Physics-Informed Neural Networks (PINNs) · PyTorch · Google Earth Engine · Geospatial Analysis

- Built a Physics-Informed Neural Network to predict Land Surface Temperature across Ahmedabad, embedding heat-transfer physics into the training loss using satellite indices (NDVI, NDBI, LST).
- Derived an urban-heat-island mitigation strategy via gradient-based optimisation over the trained model, recommending vegetation and built-up density changes for city planners.

Impact of Short-Form Video Usage on Academic Performance

Python · Scikit-learn · Pandas · Streamlit · EDA

- Collected a 207-student dataset by distributing a Google Form survey among friends and peers, covering five behavioural dimensions, then ran EDA to surface screen-time vs. GPA correlations.
- Benchmarked six ML classifiers, with Random Forest performing best after tuning, and applied K-Means clustering to segment students into risk cohorts (validated via ANOVA, $p < 0.05$).
- Shipped an interactive Streamlit dashboard for real-time risk profiling.

UPI FraudGuard — AI-Powered Fraud Detection Platform

XGBoost · FastAPI · Node.js / Express · MongoDB Atlas · React

- Built a full-stack fraud-detection system (XGBoost, 97% accuracy) with a FastAPI inference service, a Node/Express + JWT backend, and a 12-page React/Tailwind frontend with a multilingual chatbot and smart complaint routing.

EDUCATION

MSc in Big Data Analytics & AI — St. Xavier's College (Autonomous), Ahmedabad **2025 – 2027**
Relevant Coursework: Machine Learning, Deep Learning, Statistical Modelling, Big Data Technologies, Data Engineering

Bachelor of Computer Applications (BCA) — Indus University, Ahmedabad **2022 – 2025**
Relevant Coursework: Data Structures & Algorithms, DBMS, OOP (Java/C++), Web Technologies, Software Engineering

CERTIFICATIONS & CORE COMPETENCIES

Kaggle: Machine Learning · Data Cleaning · Data Engineering · Prompt Engineering for AI
Coursera: Python for Everybody (University of Michigan)
Udemy: UML – Complete Guide · Business Management · C and C++ Programming
Skill Nation: AI Tools & Applications