

YUG BHATT

Artificial Intelligence & Machine Learning Engineer

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AI & Machine Learning engineering student specializing in intelligent financial systems and predictive risk modeling. Currently developing SmartFlare, a multi-model financial intelligence engine integrating anomaly detection, NLP-based compliance analysis, and dynamic risk scoring. Strong foundation in data structures, statistics, and model optimization. Actively seeking AI/ML internship opportunities to build impactful real-world systems.

EXPERIENCE

AI & Machine Learning Developer (Academic Projects)

SmartFlare: The Financial Nervous System Designed and developed SmartFlare, a financial risk intelligence system integrating 6 AI-driven analytical modules for dynamic loan risk assessment. Engineered a multi-model architecture combining:

- Transaction anomaly detection
- Industry market trend analysis
- NLP-based compliance monitoring
- Predictive default modeling
- Owner resilience profiling
- Financial stress velocity scoring

Built a dynamic Risk Velocity Score algorithm to quantify real-time financial instability signals from heterogeneous datasets. Implemented anomaly detection techniques to identify fabricated UPI transaction patterns and circular trading behavior. Developed predictive models for Probability of Default (PD) using structured financial indicators and historical failure patterns. Integrated sectoral stock indices (Nifty Auto, Pharma, etc.) to correlate macroeconomic downturns with borrower-level risk exposure. Conceptualized a Neural Risk Source Tree visualization system improving interpretability of financial risk signals. Optimized preprocessing pipelines for high-frequency financial transaction data and compliance text datasets.

2025 – Present
Self-Driven | Gujarat,
India

EDUCATION

Bachelor of Technology – Artificial Intelligence & Machine Learning,

CHARUSAT University, Anand, Gujarat

CGPA (1st Year): 7.12 Focused on Machine Learning, Mathematics, Data Structures, and AI System Design.

2024 – 2028

SKILLS

Machine Learning Model Development

Supervised & Unsupervised Learning, Feature Engineering, Model Evaluation

Anomaly Detection Systems

Fraud Detection, Transaction Pattern Analysis

Technical Stack

Python, C, C++, Java Scikit-Learn, NumPy, Pandas SQL, Data Analysis Git & GitHub

Deep Learning

Neural Networks, CNNs, Fundamentals of NLP

Natural Language Processing (NLP)

Text Mining, Sentiment Analysis, Compliance Monitoring

Financial Risk Modeling

Default Prediction, Risk Scoring, Market Sensitivity Analysis

Data Processing

Data Cleaning, Feature Engineering, Pipeline Optimization