Aadip Thapaliya

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Profile

Data Science student specializing in machine learning, time-series modelling, and automated analytical workflows. Experienced with Python, deep learning frameworks, and building end-to-end ML pipelines. Passionate about applying AI to financial systems, anomaly detection, and real-world risk prediction. Strong track record of delivering reproducible models, working on research-driven projects, and collaborating with cross-functional teams.

Education

BSc Digital Business & Data Science **GPA-1.90**
University of Europe for Applied Sciences (UE) **2024-2027**

Experience

Machine Learning Research Intern 01/2025 – 07/2025
Varun Herbal Pvt.Ltd Remote

- Engineered and analysed **10k+ weather, soil, and IoT sensor records** to build crop-yield and irrigation-recommendation prototypes, achieving strong performance 10% prediction error.
- Contributed to a **CNN-based plant disease detection model** using **15k+ images**, reaching approx. **85% accuracy** in prototype testing.

Technical Skills

Programming & Modelling: Python, SQL, Machine Learning, Predictive Modelling, HTML/CSS, Git

libraries & Frameworks: Pandas, NumPy, Matplotlib, Seaborn, Plotly, Bokeh, Scikit-learn, TensorFlow, Keras, PyTorch,XGBoost, LightGBM,CatBoost, Statsmodels, NLTK, SpaCy, SciPy, Dash, PostgreSQL,Model Explainability (SHAP/LIME)

Core Competencies: Data Structures & Algorithms, OOP, DBMS, Agile Methodology

Projects

CLUE – Contextual Likelihoods For User Centric

- **Challenge:** Analysts relied on a slow, multi-step workflow for cleaning data, fetching price histories, training forecasting models, and generating reports for financial time-series analysis.
- **Action:** Built a one-input offline forecasting tool with automatic Yahoo Finance download or CSV upload, a PySide6 desktop UI, Report Lab based PDF reporting, and a hybrid Auto-ARIMA + XGBoost modelling pipeline.
- **Result:** Delivered accurate 30-day forecasts (MAE 12.4 on a 20% test split) and replaced the entire manual workflow with a fully automated system that outputs clear visualizations and narrative insights.

Advanced Time Series in Finance - Team Project

- **Challenge:** Forecast accuracy was limited due to inconsistent pre-processing, weak feature engineering, and no structured comparison across classical, ML, and deep-learning methods.
- **Action:** Benchmarked multiple forecasting approaches on 10–15 years of financial data using Python, R, TensorFlow, PyTorch, and scikit-learn, applying systematic pre-processing, feature engineering, and rigorous evaluation.
- **Result:** Identified the best-performing models for each dataset and **significantly improved predictive accuracy**, establishing a reproducible evaluation framework.

Certifications

Advance Time Series Prediction - opencampus.sh: Deep Learning (RNN, DNN, CNN), Stock Forecasting (10 years). Demonstrated teamwork and strong analytical skills.

Foundational Mathematics for AI - opencampus.sh: Applied Linear Algebra, Calculus, and Statistics

Git Training Certification Simplilearn: Git, GitHub, GitLab, BASH, and Version Control

Python Bootcamp - Udemy: Python, OOP, NumPy, Web Scraping, Data Handling

Language Proficiency

English: Fluent (C1) | **German:** Beginner (A2)