

# Aman Yadav

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## Professional Summary

Passionate data scientist with expertise in machine learning, statistical analysis, and data-driven decision making. Experienced in developing end-to-end ML solutions, building predictive models, and creating actionable insights from complex datasets. Strong background in Python programming, statistical modeling, and data visualization with proven track record of delivering business value through data science initiatives.

### Key Achievements:

- **90%+ Model Accuracy** achieved across multiple machine learning projects
- **40% Reduction** in data processing time through optimized pipelines
- **25% Improvement** in prediction accuracy for market trend forecasting models

## Education

**MSc in Financial Engineering** (*In Progress - 1st Year*)

WorldQuant University

**B.Tech in Civil Engineering** (2018)

Dr. APJ Abdul Kalam Technical University

## Work Experience

### Derivative/Data Analyst

**Adroit Financials** | Gurgaon, India | *May 2024 - Present*

- Applied machine learning algorithms and statistical models to analyze large financial datasets, improving prediction accuracy by 25% for market trend forecasting
- Developed Python-based data pipelines for real-time data processing and analysis, reducing data processing time by 40% using Pandas, NumPy, and automated workflows
- Created interactive dashboards and data visualizations using Plotly and Streamlit to present complex insights to stakeholders, enhancing data-driven decision-making
- Implemented time series analysis and forecasting models for financial data, achieving 90% accuracy in short-term predictions using ARIMA and logistic regression approaches
- Collaborated with cross-functional teams to extract actionable insights from structured and unstructured data, supporting strategic business initiatives
- Applied statistical techniques including hypothesis testing, A/B testing, and regression analysis to validate model performance and business hypotheses

## Technical Skills

**Programming Languages:** Python, SQL

**Machine Learning:** Supervised/Unsupervised Learning, Deep Learning, Ensemble Methods, Neural Networks

**Data Analysis:** Statistical Analysis, Hypothesis Testing, A/B Testing, Regression Analysis, Time Series Analysis

**Data Visualization:** Matplotlib, Seaborn, Plotly, Tableau, Streamlit

**Libraries & Frameworks:** Pandas, NumPy, scikit-learn, TensorFlow

**Databases:** PostgreSQL, MySQL, MongoDB, SQLite

**Tools:** Jupyter, Git, yfinance API

## **Data Science Projects**

### **Bankruptcy Prediction in Polish Companies**

Developed a comprehensive machine learning solution to forecast corporate bankruptcies using financial statement data. Applied advanced data preprocessing techniques to handle imbalanced datasets and multicollinearity among financial ratios. Implemented multiple classification algorithms and achieved 88% precision using ensemble methods.

**Key Skills:** Imbalanced Data Handling, Feature Selection, Statistical Modeling, Risk Assessment

### **Customer Segmentation using Machine Learning**

Developed a customer segmentation model to analyze purchasing behavior and identify distinct customer groups. Applied clustering algorithms to uncover patterns in demographics and transaction data, enabling better targeting strategies for businesses. Created interactive visualizations and dashboards to present insights on customer profiles and segment distributions.

**Key Skills:** Data Preprocessing, Clustering (K-Means, Hierarchical), Exploratory Data Analysis, Customer Analytics, Dashboard Development

### **Stock Price Forecasting with Deep Learning**

Created a deep learning model using LSTM networks to predict stock prices and market trends. Implemented feature engineering techniques including technical indicators, moving averages, and volatility measures. Applied walk-forward optimization and cross-validation to prevent overfitting and ensure model robustness.

**Key Skills:** Deep Learning, Time Series Forecasting, Financial Modeling, API Integration

### **Real-time Analytics Dashboard**

Designed and developed an interactive dashboard using Streamlit and Plotly for real-time business analytics. Integrated multiple data sources through APIs and databases, implementing automated data pipelines for continuous updates. Created comprehensive KPI visualizations and trend analysis tools.

**Key Skills:** Dashboard Development, Real-time Analytics, Data Integration, Business Intelligence

## **Certifications & Learning**

- **Foundations of Financial Engineering** - WorldQuant University
- **Applied Data Science** - WorldQuant University