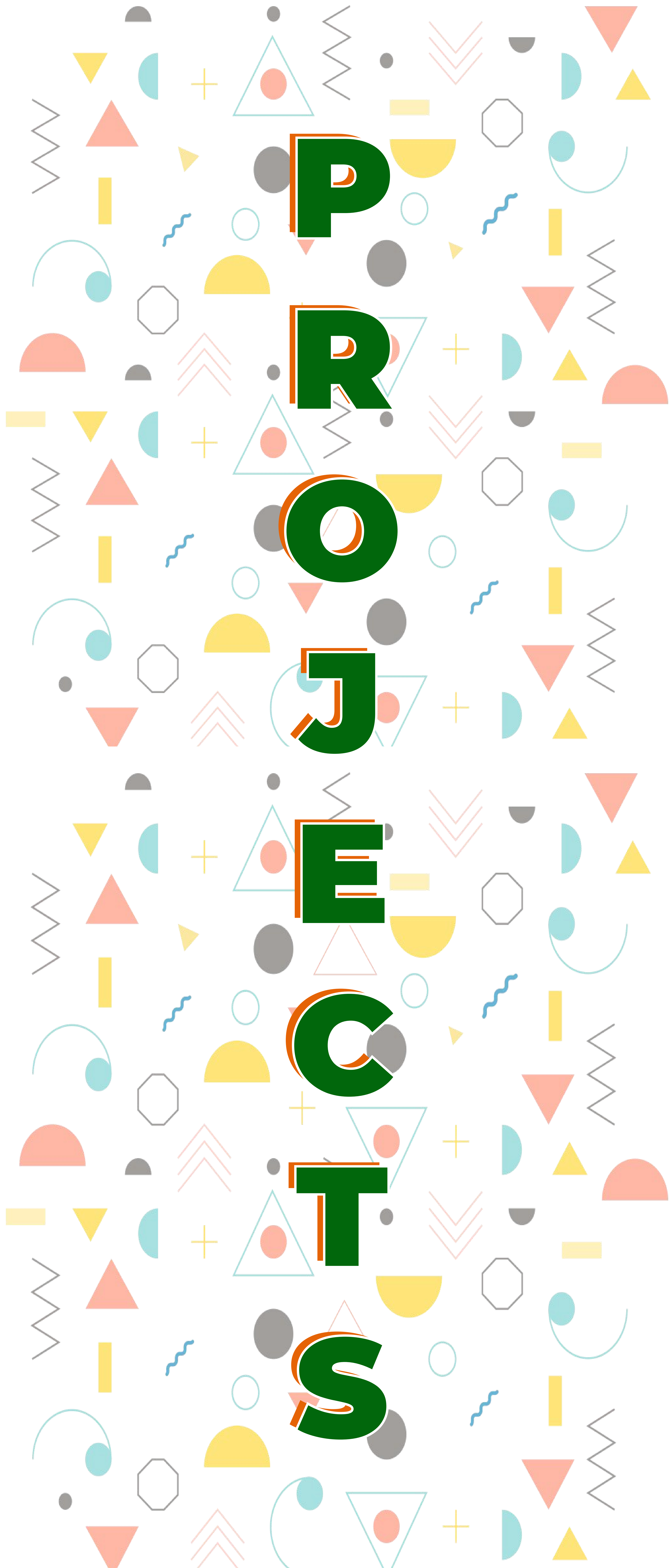




# Data Analytics





# 1.IPL data Analysis and extract various insights using different graphs

BEGINNER



## Description :

The **IPL Data Analysis** project focuses on extracting valuable insights from IPL match data using various data analytics techniques. By analyzing historical match outcomes, player performances, team comparisons, and venue statistics, the project visualizes trends and patterns through graphs like bar charts, line graphs, and scatter plots. It also explores player career insights, auction analysis, boundary counts, and more. With Python's powerful libraries like Pandas and Matplotlib, this project provides a comprehensive overview of IPL data for in-depth analysis and decision-making.

## Features :

### 1. Match Outcome Analysis

- Visualize match outcomes (Win/Loss) across different years.
- Analyze team performance based on historical data and seasonal trends.

### 2. Player Performance

- Track individual player statistics like runs, wickets, and strike rates.
- Use bar graphs and scatter plots to visualize player contributions.

### 3. Team Comparison

- Compare team performance using line and pie charts for win percentage.
- Analyze the impact of team changes, including player transfers or injuries.

### 4. Venue Performance

- Evaluate match outcomes across different IPL venues.
- Present venue-based performance using heatmaps or bar charts.

### 5. Run Rate & Scoring Analysis

- Visualize average run rates for different teams and players.
- Use line graphs to track scoring trends over the years.

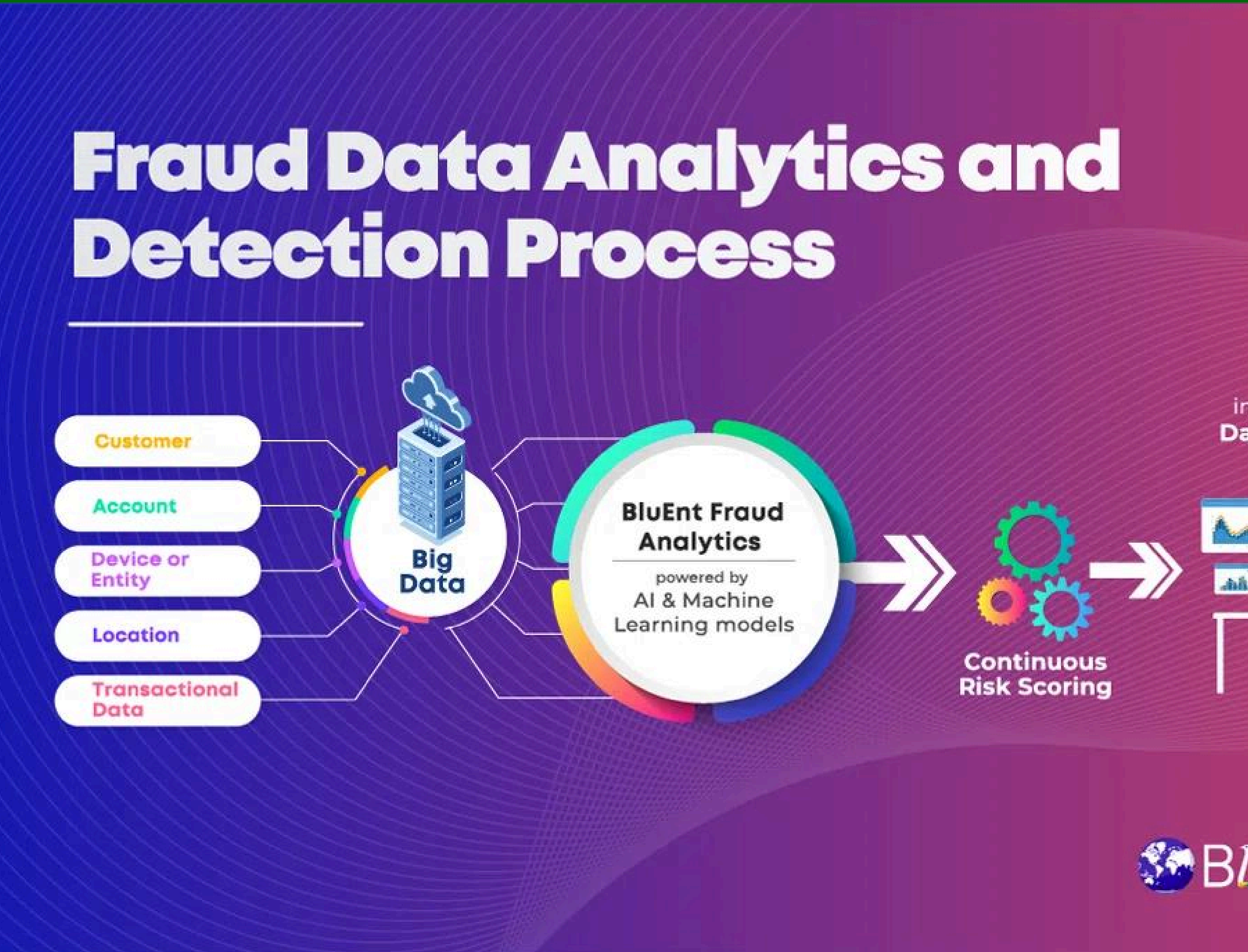
### 6. Best Batting Partnerships

- Identify and visualize top batting pairs using histograms.
- Analyze successful partnerships based on runs scored and boundary rates.



# 2.Advanced Financial fraud detection model with dashboard

INTERMEDIATE



## Description :

The **Advanced Financial Fraud Detection** Model with Dashboard is a data analytics project designed to detect and prevent financial fraud effectively. Leveraging machine learning algorithms, it analyzes transaction patterns, user behavior, and historical data to classify transactions as legitimate or fraudulent. The real-time dashboard provides interactive visualizations and insights, enabling users to monitor risks and analyze trends. Built using Python with libraries like Scikit-learn, TensorFlow, and Flask, this system ensures robust fraud detection while supporting data-driven decision-making.

## Features :

- ### 1. Machine Learning Integration

  - Employs supervised and unsupervised machine learning algorithms.
  - Adapts to emerging fraud patterns for dynamic detection.
- ### 2. Real-Time Transaction Monitoring

  - Analyzes financial transactions in real-time for instant fraud detection.
  - Alerts users immediately upon detecting suspicious activity.
- ### 3. Behavioral Pattern Analysis

  - Tracks user behavior to identify unusual patterns.
  - Differentiates between normal and potentially fraudulent activities.
- ### 4. Interactive Dashboard

  - Provides data visualizations of fraud trends and transaction risks.
  - Allows easy exploration of fraud analytics for informed decisions.
- ### 5. Historical Data Utilization

  - Leverages past transaction data for predictive insights.
  - Builds robust models using a mix of historical and real-time data.
- ### 6. Scalability and Customization

  - Accommodates large-scale data analytics for enterprise-level operations.
  - Offers customizable rules and thresholds for fraud detection.



# 3. Time series Analysis with cryptocurrency

ADVANCE



## Description :

**Time Series Analysis with Cryptocurrency** Data leverages advanced data analytics techniques to explore and analyze historical cryptocurrency trends. This project focuses on price forecasting, volatility measurement, and identifying market patterns using algorithms like ARIMA and LSTM. By visualizing data through interactive charts and graphs, it provides actionable insights for traders and investors. Additionally, the project detects anomalies in trading activities and examines correlations between cryptocurrencies and external factors, aiding in informed decision-making and strategic portfolio management.

## Features :

### 1. Price Trend Analysis

- Analyzes historical price trends of various cryptocurrencies.
- Identifies bullish and bearish market periods with visual insights.

### 2. Volatility Measurement

- Calculates and visualizes price fluctuations over time.
- Highlights periods of high or low market stability.

### 3. Forecasting

- Predicts future cryptocurrency prices using ARIMA and LSTM models.
- Provides short-term and long-term forecasting for investment decisions.

### 4. Correlation Insights

- Explores relationships between cryptocurrencies and external factors.
- Identifies correlations between crypto assets for better portfolio management.

### 5. Interactive Visualization

- Includes line charts, candlestick charts, and heatmaps for data exploration.
- Simplifies complex data through dynamic and intuitive graphs.

### 6. Anomaly Detection

- Detects irregular trading activities and outlier patterns.
- Flags potential market manipulations or unusual trends in data.