Metaverse transactional Data EDA

**Potential Analyses and Applications:**

1. **Descriptive Statistics**:
   * Calculate the mean, median, standard deviation, and other descriptive statistics for the 'Amount' column to understand the typical transaction size.
   * Analyse the distribution of 'Transaction Type', 'Location Region', 'Age Group', and 'Anomaly' to identify patterns and trends.
2. **Time Series Analysis**:
   * Examine the transaction volume over time using the 'Timestamp' column to identify any seasonal patterns or trends.
   * Analyse the 'Hour of Day' column to determine the peak transaction hours.
3. **Anomaly Detection**:
   * Develop and train machine learning models to identify anomalies based on the 'Risk Score' and 'Anomaly' columns.
   * Evaluate the performance of the anomaly detection models using metrics such as precision, recall, and F1-score.
4. **Fraud Analysis**:
   * Investigate transactions categorized as 'scam' or 'phishing' in the 'Transaction Type' column to understand the characteristics of fraudulent activities.
   * Identify common features or patterns associated with fraudulent transactions.
5. **Predictive Analytics**:
   * Build predictive models to forecast the risk of transactions based on transaction characteristics, user behaviour, and historical data.
   * Evaluate the predictive models using appropriate metrics and techniques such as cross-validation.
6. **Correlation Analysis**:
   * Examine the correlation between different features (e.g., 'Amount', 'Risk Score', 'Session Duration') to identify relationships and dependencies within the dataset.
7. **Geospatial Analysis**:
   * Visualize the geographical distribution of transactions using the 'Location Region' column to identify hotspots or regions with high transaction volumes or risks.
8. **User Behaviour Analysis**:
   * Analyse the relationship between 'Login Frequency', 'Session Duration', 'Purchase Pattern', and 'Risk Score' to understand how user behaviour influences transaction risk.