Using Data Analysis for Detecting Credit Card Fraud

Answer the following 5 (five) questions based on the mentioned case study:

1. List at least 5 (five) data points that are required for the analysis and detection of a credit card fraud. (3 marks)

    - **Card holder / Customer Id**
    - **Transaction date**
    - **Transaction time**
    - **Transaction value**
    - **Shipping address**
    - **IP address**
    - **Device model**
    - **Location**

2. Identify 3 (three) errors/issues that could impact the accuracy of your findings, based on a data table provided. (3 marks)

    - **Missing transaction value**
    - **Missing IP Address**
    - **Date format inconsistency**

3. Identify 2 (two) anomalies, or unexpected behaviors, that would lead you to believe the transaction may be suspect, based on a data table provided. (2 marks)

    - **Significantly higher Transaction Value where Shipping Address has been changed from home/office address to P.O. Box.**
    - **Higher Transaction Value and increased frequency of transactions.**

4. Briefly explain your key take-away from the provided data visualization chart. (1 mark)

    - **The visualization depicts the transaction values per transaction for all three users. The key take-away from this visualization is the sharp rise in the transaction values for users *johnp* and *ellend*, which may be indicative of an anomaly.**

5. Identify the type of analysis that you are performing when you are analyzing historical credit card data to understand what a fraudulent transaction looks like. [Hint: The four types of Analytics include: Descriptive, Diagnostic, Predictive, Prescriptive] (1 mark)

    - **“Descriptive Analytics”**