

## Peer-graded Assignment: Peer-Graded Final Assignment

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**You passed!**

Congratulations. You earned 10 / 10 points. Review the feedback below and continue the course when you are ready. You can also help more peers by reviewing their submissions.

Review  
assignments

**Instructions**   **My submission****Discussions**

## Using Data Analysis for Detecting Credit Card Fraud

Submitted on November 1, 2023

[Shareable Link](#)

**PROMPT**

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

- IP Address
- User ID
- Shipping Address
- Transaction Date
- Transaction Time
- Transaction Value

**RUBRIC**

Did the learner list 5 or more data points out of the 8 data points listed below that are required for the analysis and detection of a credit card fraud?

1. Card holder / Customer Id
2. Transaction date
3. Transaction time
4. Transaction value
5. Shipping address
6. IP address
7. Device model
8. Location



**3 points**

WG

**Correct. The learner listed 5 or more data points out of the 8 data points listed below that are required for the analysis and detection of a credit card fraud.**

1. Card holder / Customer Id
2. Transaction date
3. Transaction time
4. Transaction value
5. Shipping address
6. IP address
7. Device model
8. Location



**2 points**

**Partially Correct. The learner listed 3 to 4 data points out of the 8 data points listed below that are required for the analysis and detection of a credit card fraud.**

1. Card holder / Customer Id
2. Transaction date
3. Transaction time
4. Transaction value
5. Shipping address
6. IP address
7. Device model
8. Location



**1 point**

**Partially Correct. The learner listed 1 to 2 data points out of the 8 data points listed below that are required for the analysis and detection of a credit card fraud.**

1. Card holder / Customer Id
2. Transaction date
3. Transaction time

4. Transaction value
5. Shipping address
6. IP address
7. Device model
8. Location

0 points

Incorrect. The learner did not list any data points out of the 8 data points that are required for the analysis and detection of a credit card fraud.

### PROMPT

Refer to the data table below and identify 3 (three) errors/issues that could impact the accuracy of your findings. (3 marks)

IP Address	User ID	Account Number	Age	Shipping Address	Transaction Date	Transaction Time	Transaction Value	Product Category	Units Purchased
5.56.125.0	johnp	25671147	32	1542, Orchid Lane, WA 98106, US	15-5-20	15:00:05	\$121.58	Clothing	1
5.56.125.0	johnp	25671147	32	1542, Orchid Lane, WA 98106, US	10-6-20	10:20:10	\$79.23	Electronics	2
5.56.125.0	johnp	25671147	32	1542, Orchid Lane, WA 98106, US	1-6-20	07:12:45		Home Decor	1
1.184.52.7	johnp	25671147	32	in-store	3-6-20	01:11:10	\$2,009.89	Electronics	10
	johnp	25671147	32	in-store	2020-06-03	01:10:12	\$4,111.60	Electronics	15
1.184.52.7	johnp	25671147	32	P.O. Box 1049	03-08-2020	21:22:24	\$3,010.50	Tools	20
1.58.167.2	davidg	51422789	47	90 Robinson Blvd, Alberta, T7E0G2, Canada	15 May 2020	17:02:08	\$234.29	Furniture	1
1.58.167.2	davidg	51422789	47	90 Robinson Blvd, Alberta, T7E0G2, Canada	18 May 2020	19:12:45	\$141.00	Kitchen Supplies	3
	davidg	51422789	47	90 Robinson Blvd, Alberta, T7E0G2, Canada	01 June 2020	17:34:15	\$157.25	Car Spares	2
1.58.167.2	davidg	51422789	47	90 Robinson Blvd, Alberta, T7E0G2, Canada	13 June 2020	18:01:10	\$59.99	Kitchen Supplies	1
172.145.10.1	wilend	11568528		P.O. Box 1312	07 June 2020	18:50:12	\$99.99	Clothing	1
172.145.10.1	wilend	11568528		P.O. Box 1312	08 June 2020	17:15:30	\$53.15	Beauty	1
1.187.255.13	wilend	11568528		P.O. Box 9401	02 July 2020	20:05:10	\$4,895.00	Laptop	1

- Missing 2 IP Address
- Format Date in Transaction Date are discrepancy
- Missing 1 Transaction Value

### RUBRIC

Did the learner identify at least 3 errors/issues that could impact the accuracy of the findings?

Some of the issues that could impact the accuracy of findings include:

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

3 points

Correct. The learner identified 3 errors/issues that could impact the accuracy of the findings.

WG

2 points

Partially Correct. The learner identified at least 2 errors/issues that could impact the accuracy of the findings.

1 point

Partially Correct. The learner identified 1 error/issue that could impact the accuracy of the findings.

- 0 points  
Incorrect. The learner did not identify any error/issue.

## PROMPT

Refer to the data table below and identify 2 (two) anomalies or unexpected behaviors, that would lead you to believe the transaction may be suspect. (2 marks)

IP Address	User ID	Account Number	Age	Shipping Address	Transaction Date	Transaction Time	Transaction Value	Product Category	Units Purchased
5.56.125.9	johnp	15671247	32	1342, Dorchid Lane, W6B 0B706, US	15-5-20	15:00:05	\$121.58	Clothing	1
5.56.125.9	johnp	15671247	32	1342, Dorchid Lane, W6B 0B706, US	10-6-20	10:12:10	\$79.23	Electronics	2
5.56.125.9	johnp	15671247	32	1342, Dorchid Lane, W6B 0B706, US	1-8-20	07:42:19		Home Decor	1
1.186.52.7	johnp	15671247	32	in-store	9-6-20	01:11:10	\$1209.99	Electronics	10
	johnp	15671247	32	in-store	2020-06-03	01:15:12	\$4,131.80	Electronics	15
1.186.52.7	johnp	15671247	32	P.O. Box 1049	09-06-2020	01:22:24	\$3,010.90	Tools	20
1.58.167.2	davidg	51422789	47	80 Robinson Blvd, Alberta, T9T6G2, Canada	15 May 2020	17:02:08	\$134.28	Furniture	1
1.58.167.2	davidg	51422789	47	80 Robinson Blvd, Alberta, T9T6G2, Canada	18 May 2020	16:12:45	\$145.00	Kitchen Supplies	3
	davidg	51422789	47	80 Robinson Blvd, Alberta, T9T6G2, Canada	01 June 2020	17:34:15	\$157.23	Car Spares	2
1.58.167.2	davidg	51422789	47	80 Robinson Blvd, Alberta, T9T6G2, Canada	13 June 2020	18:00:10	\$59.99	Kitchen Supplies	1
172.145.101	ellend	11568528		P.O. Box 1312	07 June 2020	15:50:12	\$96.99	Clothing	1
172.145.101	ellend	11568528		P.O. Box 1312	08 June 2020	17:15:30	\$93.15	Beauty	1
1.167.255.17	ellend	11568528		P.O. Box 9402	02 July 2020	00:05:10	\$4,899.00	Laptop	1

- Several higher transaction value to different Shipping Address
- Transaction Value and frequency of transactions Increase suspiciously
- IP Address and Shipping address change in anomaly pattern

## RUBRIC

Did the learner identify 2 anomalies, or unexpected behaviors, that would lead them to believe the transaction may be suspect?

Some of anomalies in the provided data set include:

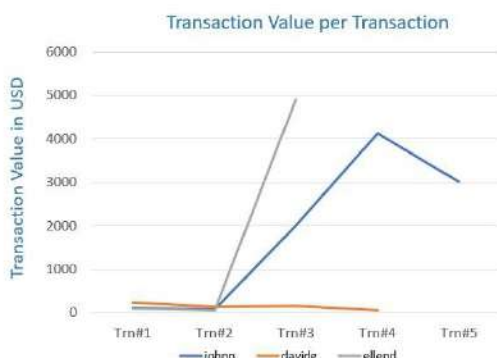
- Significantly higher **Transaction Value** where **Shipping Address** has been changed from home/office address to P.O. Box.
- Higher **Transaction Value** and increased frequency of transactions.
- IP Address** change and significantly higher **Transaction Value**.
- IP Address** change and **Shipping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

**Note:** It is OK for the learners to answer this in their own words.

- 2 points WG  
Correct. The learner identified 2 anomalies or unexpected behaviors that would lead them to believe the transaction may be suspect.
- 1 point  
Partially Correct. The learner identified 1 anomaly or unexpected behavior that would lead them to believe the transaction may be suspect.
- 0 points  
Incorrect. The learner did not identify an anomaly or unexpected behavior.

## PROMPT

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



## RUBRIC

Did the learner explain a key take-away from the data visualization chart?

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.

**Note:** It is OK for the learners to answer this in their own words.

- 1 point WG  
Correct. The learner provided a key take-away.

In this line-chart ,we can observe the trend of transaction values for three users over 5 time steps.

The Key take-away from the provided data visualization chart is the high anomaly increase in transaction Value for "jonp" and "ellend". The trend is suspicious for those two customers from the "Trn#2" and should be verified in depth.

☐ 0 points

The learner did not provide any key take-away

#### PROMPT

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)

The type of analysis performed is Descriptive Analytics

#### RUBRIC

Did the learner identify the type of analysis that they are performing when they are analyzing historical credit card data to understand what a fraudulent transaction looks like?

☒ 1 point

**Correct. The learner identified 'Descriptive Analytics' as the type of analysis that they are performing when they are analyzing historical credit card data to understand what a fraudulent transaction looks like.**

WG

☐ 0 points

Incorrect. The learner did not identify the type of analysis as '**Descriptive Analytics**'.

