

Name:

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ID:

Section:

Q: What is the goal of Data Science?

Q: List the seven phases of the DSM, and State the importance of each phase (a sentence).

Phase

Importance

1.

2.

3.

4.

5.

6.

7.

Q: Which areas of study does data science combine?

1.

2.

3.

Q: Explain how the Data Science Model approach is adaptive and iterative.

Adaptive:

Iterative:

Q: Name three models commonly used in Data Science.

- 1.
- 2.
- 3.

Q: Define the z-score of a record x, and State the importance of calculating the z-score.

z-score=

Importance:

Q: Use the confusion table below to calculate the following

Type I error =

Type II error =

Accuracy =

		Prediction	
		True	False
Actual	60	16	
	14	10	

Q: A bank had two marketing loan campaigns Use the Crosstab table to answer the following

1. The number who accepted the previous plan =
2. The number who rejected the current plan =
3. The number of records in the previous plan =
4. The number of records in the current plan =

Current →	Accepted	Rejected
Previous		
Accepted	120	80
Rejected	30	20
Nonexistent	10	70

Q: Let df be a data frame imported in Jupiter Python. Write the advantage of using the following commands:

- `import pandas as pd`
- `df.head()`
- `df.loc[3]`
- `df.describe()`
- `df.info()`
- `df.corr()`
- `df.columns`
- `df[['age', 'income']]`
- `df['age'].plot(kind='hist')`
- `df['age']=df['age'].replace({999: np.NaN})`
- `df.query('income>20,000 | income<20')`
- `stats.zcore(df['income'])`