

<p><b>PROMPT</b></p> <p>Which topic did you choose to apply the data science methodology to? <b>(2 marks)</b></p> <p><b>Email</b></p> <div> <div></div> <div></div> </div>	<p><b>RUBRIC</b></p> <p>Did the student pick one of the three topics proposed in the assignment overview?</p> <ul style="list-style-type: none"> <li><input type="radio"/> 0 points No</li> <li><input checked="" type="radio"/> <b>2 points</b> Yes</li> </ul> <div>SU</div>
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You are required to:

1. Describe the problem, related to the topic you selected.
2. Phrase the problem as a question to be answered using data.

For example, using the food recipes use case discussed in the labs, the question that we defined was, "Can we automatically determine the cuisine of a given dish based on its ingredients?".

#### The Problem

The company wants to send emails that are more relevant to the customer based on their purchases in the store. For example, if a customer buys a shampoo, the emails they receive will be automatically related to that type of product or may be relevant to customers who make that type of purchase.

#### The Question

Is it possible to send more relevant emails to the customer based on their purchases?

- ☐ 1 point  
Poor. Some description is provided about the problem, but the question to be answered is missing.
- ☐ 2 points  
Good. The problem to be solved is described and a question is submitted but the question does not match the problem described.
- ☒ **3 points**  
Excellent. The student gave sufficient description of the problem, and the question to be answered reflects the problem described.

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#### PROMPT

Briefly explain how you would complete each of the following stages for the problem that you described in the Business Understanding stage, so that you are ultimately able to answer the question that you came up with. **(5 marks):**

1. Analytic Approach
2. Data Requirements
3. Data Collection
4. Data Understanding and Preparation
5. Modeling and Evaluation

You can always refer to the labs as a reference with describing how you would complete each stage for your problem.

#### Analytic Approach

Depending on the purchases of customers, the relationship between their purchases and the frequency with which they open different types of emails sent by the company needs to be identified. For example, when a customer buys beauty products, they will automatically be sent emails that are related to or may be of interest to that type of customer.

#### RUBRIC

The student is required to explain how they would complete each stage for the problem that they described in the Business Understanding stage. Use your best judgement to rate the student's description of each stage.

- ☐ 1 point  
Poor. Many stages are missing and insufficient description is provided.
- ☐ 3 points  
Good. At least three stages are described and the description is clear and applies to the question defined in the Business Understanding stage. However, some stages are missing.
- ☒ **5 points**  
Excellent. All stages are described appropriately and the description is clear and applies to the question that they defined in the Business Understanding stage.

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## Data Requirements

The data of purchases made by registered customers on the website would be required, which could be obtained from the company's database. Then, the data of the email platform would be needed, in which the open rate of certain emails sent would be searched, such as: Product Promotions, Discounts, Stock Notices, among others.

## Data Collection

The data will be obtained from the company's database and the email platform.

## Data Understanding and Preparation

A pattern will be sought between what customers buy in the store and the emails they open. For example, if the customer buys soap, they may have a greater tendency to open emails about discounts on that same product.

## Modeling and Evaluation

The Clustering Model would be used to identify patterns and groups to segment customers based on what they buy and the emails they open.