Data Scientist - Synapse Team

Welcome to the Take Home Assignment as part of your application for the data scientist role at synapse. As part of this challenge, you have to create a sales forecasting model. We're excited to see the process and solutions you create to solve the problem.

Challenge

We invite you to develop a sales forecasting model using our provided datasets. This challenge is your canvas to showcase your brilliant data analysis skills, innovative modeling approaches, and keen business insights. Remember, we're more interested in your thought process and approach than in a perfect solution – so feel free to be creative and think outside the box!

About Data

We're providing you with four CSV files containing anonymized agricultural supply chain information:

sales_data.csv

- sales_id: Unique identifier for each sale
- shipping_date: Date of the sale
- material_id: Identifier for the material sold
- material_description: Brief description of the material
- std_shipping_quantity: Quantity sold
- country: Country where the sale occurred

delivery_data.csv

- delivery_id: Unique identifier for each delivery
- delivery_date: Date of the delivery
- material_id: Identifier for the material delivered
- material_description: Brief description of the material
- quantity_delivered: Quantity delivered
- country: Country where the delivery occurred

material_data.csv

- material_id: Unique identifier for each material
- description: Description of the material
- packet_size: Standard size of a packet
- unit: Unit of measurement (e.g., L for liters, KG for kilograms)

inventory_data.csv

- material_id: Identifier for the material
- date: Date of the inventory record
- inventory_quantity: Quantity in inventory
- plant_id: Identifier for the storage location
- country: Country where the inventory is located

Each file contains various fields that you're welcome to explore and leverage in your analysis. We encourage you to dive deep and discover the hidden connections between these datasets!

Your Submission – Show Us Your Brilliance!

Python Code

Craft a well-documented Python script that tells the story of your analysis.

Feel free to use any tools, libraries, or frameworks you're comfortable with.

Share your code's zipped file via Google Drive - we can't wait to see your work!

Video Presentation (5 minutes)

Create a 5-minute video presentation. This is your moment to shine!

Create a brief but impactful presentation:

Introduction & Problem Statement (2 minutes)

Code Walkthrough and Methodology (3 minutes)

Submit Here!

Link for submission of this assessment: https://forms.office.com/e/4vBfnPMd0B

Submission Deadline

Please submit both the links by <mark>Sunday (15th December 2024) 11:59PM.</mark> We're eagerly awaiting your innovative solutions!

A Few Friendly Reminders

- Ensure your links are accessible - we wouldn't want to miss out on your great work!

- The data is anonymized, so let your imagination run wild.

- Don't forget to consider the units of measurement and the hierarchical nature of the data.

- Most importantly, have fun with the challenge! We value creativity and out-of-the-box thinking.

We sincerely appreciate the time and effort you will invest in completing this challenge. This task is crafted to provide you with insights into the kind of work you might encounter at Syngenta P&S AMEA, while allowing us to appreciate your skills and problem-solving approach.

Should you have any questions or require clarifications, please do not hesitate to reach out to singh.himanshu-4@syngenta.com. We are here to support you throughout this process.

We eagerly anticipate seeing your innovative approach to sales forecasting for Syngenta P&S AMEA. We wish you the very best of luck and hope you enjoy the challenge!

Best of luck, and most importantly, have fun!

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