yipit DATA

YipitData | Analytics Engineer | Take-Home Assignment

The challenge is to implement a Dash application with interactive Plotly visualizations.

Requirements

Your task is to create a data application using Dash by Plotly that allows users to interactively explore sales data through different dimensions. The application must be built with the provided CSV dataset.

The Dash application should visualize:

1. Total Sales by Quarter and Month
2. Year-over-Year Growth Rate by Quarter and Month

A user should be able to interact with the visualizations using input components to explore segments and categories, and the visualizations should update dynamically based on the inputs.

Focus on clarity and correctness rather than styling or advanced functionality.

You are welcome to use additional open-source Python libraries to assist you in this implementation. Any dependencies should be listed in a requirements.txt file.

There are many ways to implement the solution, this exercise intends to see how you can navigate and make decisions among the technical and architectural options available.

Example Data

Use the included CSV dataset representing daily revenue. You are welcome to perform data manipulations as needed to generate the required insights. Any transformations should be documented in your EXPLAIN.md file.

metric_name	entity_name	currency	date	item_segment	category_name	value	quarter_start	quarter_end
Gross Merchandise Volume - Total	eBay	USD	2021-10-08	International	Health & Beauty	4184446.498410	2021-10-01	2021-12-31
Gross Merchandise Volume - Total	eBay	USD	2021-08-31	International	Home & Garden	25830677.516863	2021-07-01	2021-09-30
Gross Merchandise Volume - Total	eBay	USD	2021-08-20	International	Computers	7263307.928559	2021-07-01	2021-09-30

Gross Merchandise Volume - Total	eBay	USD	2021-07-11	United States	Consumer Electronics	2592651.615289	2021-07-01	2021-09-30
Gross Merchandise Volume - Total	eBay	USD	2021-06-27	United States	Consumer Electronics	2749431.432155	2021-04-01	2021-06-30

Submission Details

- If you encounter any edge cases, feel free to use your best judgment and add a comment
- You will have 72 hours upon receiving this prompt to submit your solution as a .ZIP file, which should contain:
    - Your code
    - A README.md file with instructions on:
        - How to set up and run the Dash application
        - How to interact with the visualizations
        - Any other relevant information for the grader
    - A one-pager EXPLAIN.md file explaining your approach, including:
        - Briefly describe your approach in designing this Dash application
        - Briefly highlight any insights you notice from the data
    - A screenshot of the running Dash application
    - **Important: Do not upload your solution or this prompt to Github or any public websites**

Evaluation Criteria

Your submission will be evaluated based on the following criteria:

- Whether you sent the solution within 72 hours (no bonus points for early submissions)
- Attention to detail: whether the solution you provided is correct and matches the requirements
- Clarity and communication: whether we can install and run the project using the instructions from the README.md file
- Code quality: how easy the code is to understand, how it is organized, and how well the solution visualizes the sample data provided
- Approach rationale: whether we can understand your design decisions and judgment through your EXPLAIN.md file, including how you approached trade-offs and prioritized features

Good luck, and we look forward to your submission!