Maersk AI/ML Intern: Campus Hiring Assignment

Maersk is looking for interns skilled in the spheres of AI/ML, with strong problem solving. People who have a hacker-builder mindset and are not restricted by the choice of tech stack but rather be focused on outcomes.

Your Task: Create a GenAI based agentic system which lets the users get insights on the structured dataset related to e-commerce operations. Link to the Dataset: https://www.kaggle.com/datasets/olistbr/brazilian-ecommerce/

Deliverables:

1. A 5-7 minute video demo of the product – should be a **pitch** and a technical **demonstration**, highlighting the functional parts of the product, and the **tech** behind it (architecture, models, tech used, additional data, libraries and frameworks, etc.). The video can be submitted as an unlisted link on YouTube or a Link to a file on Google Drive.
2. GitHub repo consisting of the source code and a README.md file which talks about how to run their app, brief architecture or design decisions, and any other details to document (like what you'd do next if you had more time to spend on this project).

Tech Stack to Use:

No restrictions – anything that gets the job done. Use Google AI Studio to get your own free Gemini key to build this product. If you believe it helps, use OpenRouter (https://openrouter.ai/) for a choice of free to use models. [Do not push your keys on GitHub!]

Submission Deadline:

7 Calendar Days from receiving this communication

Details of the assignment:

The dataset consists of multiple tables, each concerned with a different aspect of an e-commerce website's sales (product, customer, order details). We want users to be able to chat with this data, and directly ask, in plain English words, about the available data's intricacies and potentially do some in-depth analysis on it (eg. "Which product category was the highest selling in the past 2 quarters", "What is the average order value for items in the Electronics category", etc.). This will form your core product.

To add to this, here is where you can (and should) get creative.

- Can we make the system **more conversational**, allowing richer user exchanges and interactions, personalized conversations, intelligently managed dialogues without forgetfulness?
- Can we add **more knowledge** to back up the e-commerce data – deeper info about the products beyond the available table's data, external information sources looked up as and when required?
- Can we also add **smart utilities and functionalities**, like look ups of definitions, order locations, translations, and so on?
- Can we package this all in a **clean and modern interface** which has a great user experience that we all would love to use? Anything from a CLI to a Streamlit app to a full-stack app works, whatever gets the point across well.

Judging Parameters:

- **Breadth** – how many features and ideas could you incorporate, which make cohesive sense and showcase your wide technical prowess
- **Depth** – how detailed and well thought-out was your backing system behind your product, how potentially scalable and technically thorough was it, how much fundamental ideation and theory did it incorporate
- **UX and Polish** – how refined is the interface to look at and use, how much attention was paid to detail, how much pizzaz did you add
- **Innovation** – how much novelty did your product demonstrate, did you push any boundaries or stick to preexisting solutions?
- **Communication** – how clearly did you present your concept and your work. Did your pitch do your effort justice?