CXAPP CHALLENGE – ML

OVERVIEW

The challenge is building a simple space optimization system based on employer's space resource data. It's an open-ended task. You're responsible for the following sub-tasks:

1. Find a few insights in the dataset we provided.
2. Think about a use case on Space Optimization.
3. Build a ML model for your use case.
4. Provide a simple API to interact with the model.
5. Provide documentation explaining the approaches and how to run and test the project locally.

Find a few insights in the dataset we provided.

You can use a Jupyter notebook to dissect the data and find insights in them. Eg. How good is the dataset, how are they organized and curated, are there a lot of similarities, do they make sense, etc.

Build a ML Model

Hopefully it's a straightforward step for you. Whatever method you're using, please make sure to document it.

Provide a simple API to interact with the model

You can have a simple command line API here or if you are ambitious, you can wrap it up in a python web framework like Flask, Django, FastAPI, etc…

Provide some commentary

What is your intuition? What is unique about your idea and approach? How would you deploy this model in production? What does the tech stack look like? What database are you going to use? How would you profile its performance? How would you test and measure its accuracy over time? ETC.

Upon Submission

You can spend as little or as much time as you want on these challenges.

Couple of things that I will look for when I review your submission:

- Your code is clean and follows good practices.
- Your documentation on how to run and test the project locally is clear. If you can document your approach and trade-offs that would be even better.
- It meets the deadline.

Once you are done. Make sure to zip the submission including the task, renaming with your name in it, attach and send it to my email at siyuan.teng@cxapp.com. In the meantime, feel free to reach out and ask me any questions.

The deadline is **3 days** from the time you received this. Hope you have fun coding and good luck!