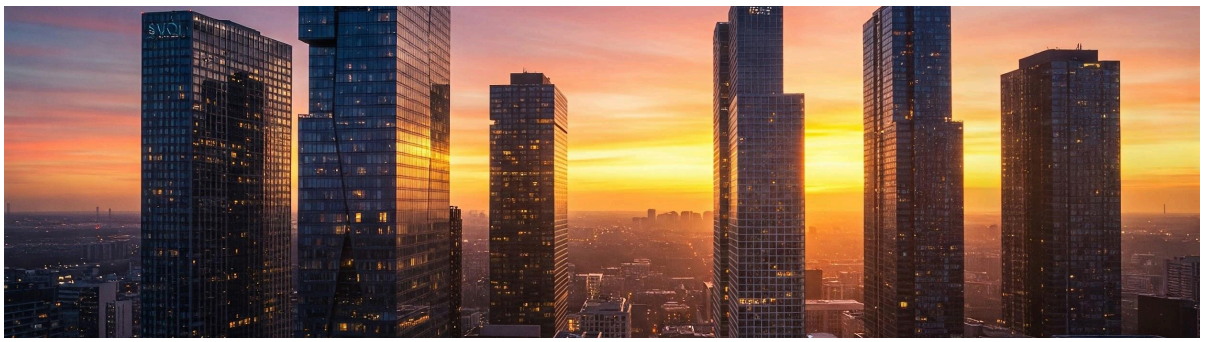

AI Developer GPT Agent Task - Real Estate Asset Management

This home task is designed to evaluate the problem-solving skills and technical abilities of an AI developer candidate specializing in GPT agents within the context of real estate asset management. This task should take approximately 6-8 hours to complete and is intended to be challenging and insightful, allowing you to demonstrate your thought process and technical expertise.

Task Overview

Develop a prototype for a simple GPT agent that can assist with basic real estate asset management tasks based on natural language instructions. The agent should demonstrate logical reasoning, sequential processing, and the ability to handle varied and unexpected inputs.

Detailed Instructions

1. **Scenario:** The agent will act as a virtual real estate asset manager assistant. The user will provide a request related to asset management, such as comparing property prices, calculating profit and loss (P&L), or retrieving asset details.
2. **Input:** The input to the agent will be in the form of natural language text. For example: "What is the price of my asset at 123 Main St compared to the one at 456 Oak Ave?" or "What is the total P&L for all my properties this year?".
3. **Processing:** The agent must:
    - Identify the type of request (price comparison, P&L calculation, asset details).
    - Extract relevant details such as property addresses, timeframes, and financial data.
    - Retrieve necessary information from a simplified, pre-loaded dataset or a simple online API (mention which is used).
    - Perform the calculation or generate a response based on the request.
    - Generate a clear, step-by-step confirmation or response with relevant data.

4. **Output:** The output should be a clear and concise response. For example:
    - "The asset at 123 Main St is priced at $500,000, while the asset at 456 Oak Ave is priced at $450,000."
    - "The total P&L for all your properties this year is $1,200,000."
    - "Details for the property at 789 Pine Ln: Address - 789 Pine Ln, Value - $300,000, Last Appraisal Date - 2024-01-15."
5. **Error Handling:** The agent should handle situations where:
    - The property address does not exist in the dataset.
    - The requested financial data is not available.
    - The request type is unclear or unsupported.
    - The input is not in the expected format.
6. **Technology Stack:** Candidates can use any programming language and any GPT model (API or local) they are comfortable with. They should document their choices and reasoning.

Evaluation Criteria

- **Functionality:** Does the agent perform the task as described?
- **Code Quality:** Is the code well-written, organized, and documented?
- **Problem Solving:** How effectively does the candidate handle unexpected inputs and edge cases?
- **Technical Knowledge:** Does the candidate demonstrate a good understanding of GPT models and relevant programming concepts?
- **Efficiency:** Is the solution reasonably efficient in terms of processing time and resource usage?

Dataset

CSV is provided separately.

Submission

Candidates should submit:

- Complete Python code (as a .zip file) or github
- Short demo video (screen recording) of the agent in action
- README file with:
    - Setup instructions
    - Description of your solution and architecture
    - Challenges you faced and how you solved them

Expected Time Commitment

This task is estimated to take 6-8 hours. Candidates should manage their time accordingly and provide a complete, working solution within this time frame.