

House Whisper Homework

Hopefully you've learned a bit about how we are helping real estate agents out and you can see how this feature would fit into House Whisper's product offering. Because our startup is early days, and we'll need versatile engineers this homework is meant to be a bit ambiguous.

Let's do a bit of roll playing here.

Me: "Welcome to House Whisper team. We have a call with Cody one of our users right now. He has been giving us great feedback so let's jump on Zoom."

Cody: "Hi folks the tech is working great. I'm talking with my shoppers, and they love my instant follow-ups and the fact it seems like I have a photographic memory."

Us: "That sounds great are you having any issues thought? We always want to get better."

Cody: "Yea sometimes House Whisper generates texts messages trying to setup the next meeting time which is amazing. But it chooses a time for me where I've already got one scheduled. Is this one of those hallucinations I read about?"

Us: "Yea Cody we try to make sure to always have a meeting scheduled with your clients but if you don't talk about in email or your phone calls, we don't know what times work for you"

Cody: "Well I'm pretty busy so I always keep my calendar up to date."

You: "I've got an idea! I bet I can peek at Cody's calendar when we send the text message."

Us: "Sounds good go ahead and build something and let's see if it solves the problem"

Your job is to help Cody along with the rest of our agents to propose meeting times that are available. To do this you'll need to create a new service that exposes available meeting times for agents.

1. Setup Test Data:
 - a. Create some test data. I've found the ICS format to be easy to work with and allows you to visualize the data but I just want to ensure you have a method of creating and playing with data.
 - b. Explain your testing data, what cases does it help you cover.
2. Create a new service with the following capabilities.
 - a. **Check Availability:** Is a given time available? Create an endpoint that checks an agent's calendar to see if they are free for a meeting at that time requested.
 - b. **Query Functionality:** Find n available times for a user given a set of time ranges and durations. This would empower the agent to give a range of times to the AI and for it to offer up a few times. Think about what the agent is likely trying to accomplish when this call is made.
 - c. **Identify what day isn't busy for an agent so we can recommend they use it to do work:** Look at their calendar and decide if the Agent has open time so

we could recommend additional work. If they are underutilized return a block of time that is available. Why is the time you offered the best?

3. Submission Details:

- a. Share your code as a link to a github repo with us.
- b. Ideally, it's in a state where we can run it to.
- c. Please get us your solution the evening before meeting us.
- d. If you want to store state, please use a file-based storage or in memory system to keep things simple

Notes:

- Each agent in our system is identified by a client_id and an agent_id.
- Our current backend is python, but you can work with whatever language and framework you are comfortable with.
- We communicate with our users through webpages, emails, texts, and their native CRM's.