

BrainBase take home write-up



Milestones

- ✓ Get response from open AI LLM in chat
- ✓ Connect to Amadeus API
 - ✓ Add the API keys to .env file
 - ✓ Make a call to API endpoints, and obtain response
- ✓ Add the Amadeus API request to tools and integrate with open ai
- ✓ Get flight options from a given source to dest and date
- ✓ Pick and fill a booking order and get booking reference from API
- ✓ Once booked, recommend hotels from destination during either
 - ✓ If only booking hotel, get the dates of stay
 - ✓ Stay duration for return trip
 - ✓ or arbitrary stay duration if one way
- ✓ Creating a second booking when one is complete
- ✓ implement logFire
- ✓ Assuming they are a customer, their travel details are stored



Design Decisions

- Agents are specialized with just one tool for now, to provide a foothold for more specific tools in their respective domains
 - For example adding seat choice tool within the search_agent
- Used pydantic_ai for defining agents, with a little research I found that they are the fastest module



Technical Decisions

1. Amadeus python SDK not working? Using access tokens and sessions/requests to get it to work for now - not ideal because token expires every 30mins
2. Had to downgrade to httpx==0.27.2
 - a. Apparently python 3.13 and latest version of httpx does not work well together
3. Transfer API from Amadeus does not include rental cars, only various ways to get from airport to desired address
4. Transfer search API does not work without Geocode, so if the LLM prompts, enter GeoCode (format: 34.0522,-118.2437)
 - a. updated to use requests instead of sessions, now it works - look into why



Future Work

- Cancelling booking and rebooking
- The model just can't get the year right lol - gotta fix that very weird.
- Adding more tools to each agent like seating for book_flight agent and rooms for book_hotel agent
- Making sure the timings during the day matches between check-out and return flight
- Destinations API to recommend tourist spots
- Need to make the process of when the user asks for flights, hotels and transfers at the same time
- Handle prompting better for one-way/return
- Choice of seats for flights and rooms for hotels
- front-end markdown display to make the openai responses look better