Building a personal agent within nebulaONE®

How to Build an Agent

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PACE Framework

PROBLEM

What is the problem you're trying to fix – How would you typically fix this without AI?

ACTION

What's the action or ask that you want the model to complete?

CONTEXT

What additional information is needed for the model to make its decision and complete its output?

EXPECTATIONS

Influence the outcome by presenting examples and expectations for it to match and meet respectively.

Building Your Agent Cheat Sheet

When do I need an agent?

- I need to communicate with the knowledge
- I need to talk to an SME
- I need another authoritative opinion or an adversarial opinion
- I need to quickly evaluate specific content or processes or decisions based on a specific context
- I need to evaluate or simulate a role/perspective/persona that is different than one I am familiar with.

How do you design an agent?

- Decide the style, tone, and behavior do we want this agent to have
- What is the main purpose for the agent?
- Who is the main audience?
- What questions will be asked and how do we want the agent to response to these queries?
- Expand on PACE
- Decide on the limitations and expectations
- Frame the output and interaction

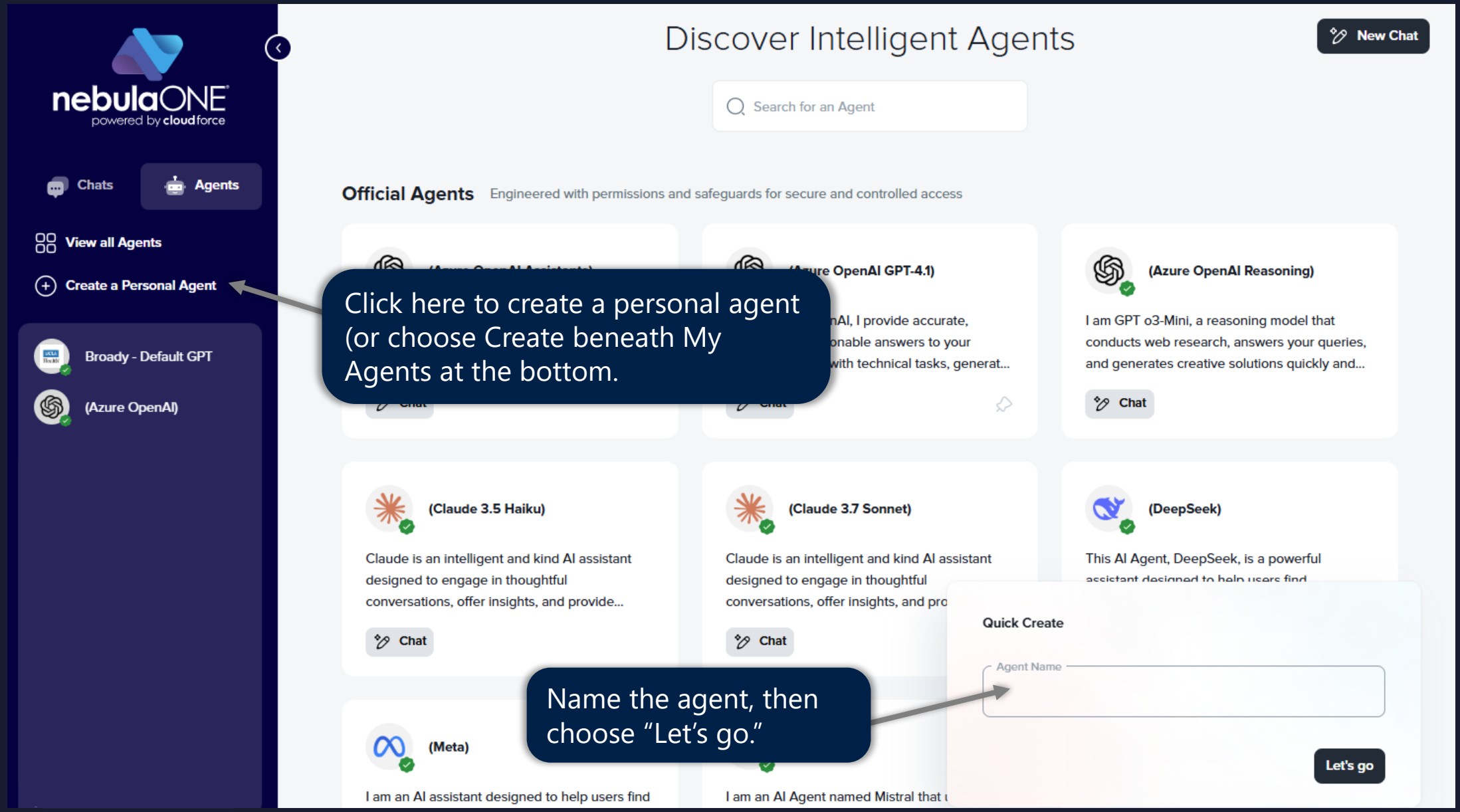
Considerations for Knowledge Sources:

- Where does the knowledge exist and how can we access it?
- Are the files in a readable format (pdf, spreadsheets, code, images, docx, pptx)?
- What sources hold authoritative information?

System Prompt Components:

- Agent Identity and Role
- Agent Style and Behavior
- Advanced Use-case Instructions and Decision Making
- User Interaction and Output
- Guidelines, Guardrails, and Operational Boundaries
- Examples and Additional Context

PERSONAL AGENTS



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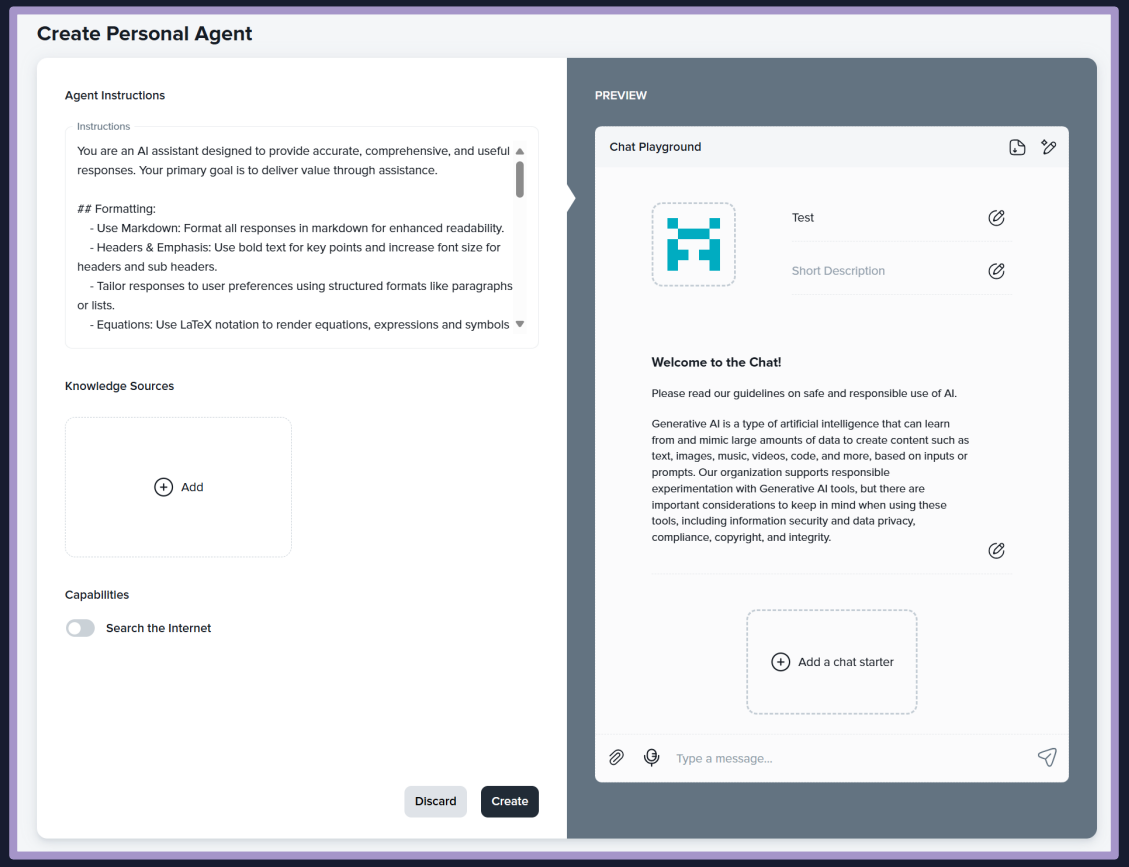
PERSONAL AGENTS

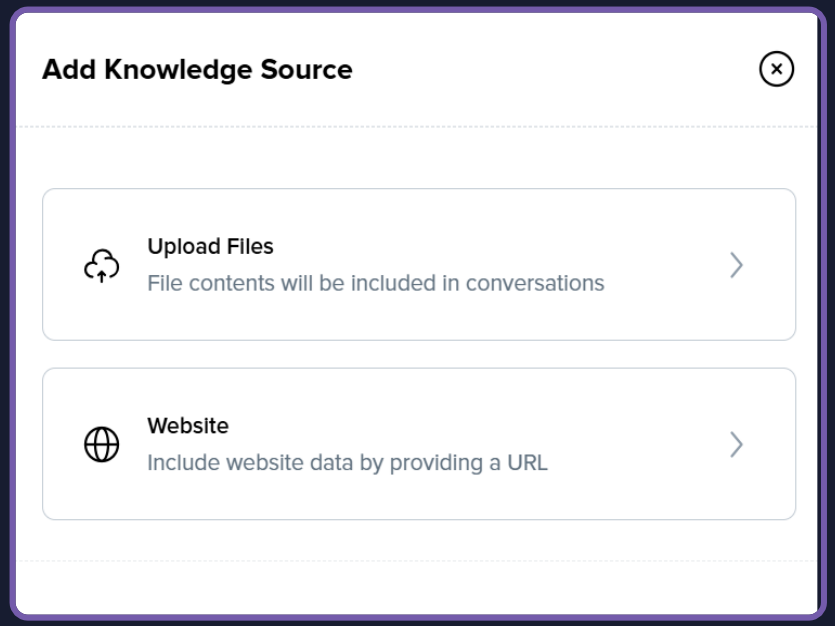
Customizations:

- System Prompt (Agent) Instructions
- Knowledge Sources
- Additional Capabilities

Chat Playground, on the right, is where you can practice engaging with the chat to determine its efficacy.

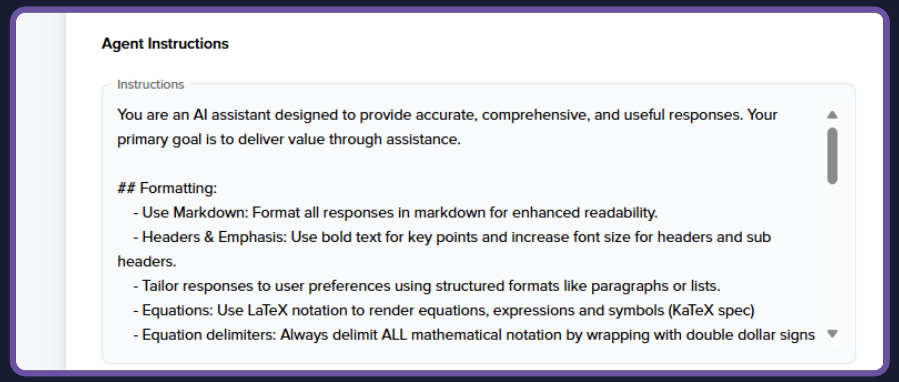


PERSONAL AGENTS



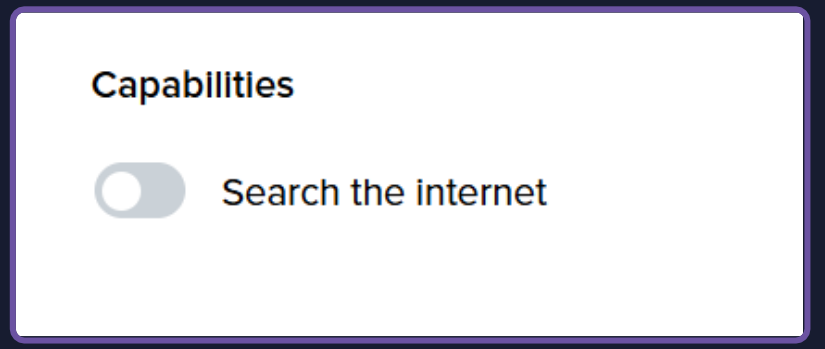
Add Knowledge Sources

- Upload Files – File contents will be included in conversations
- Website – Include website data by providing a URL.



Agent Instructions

- Set the tone, style, role, behavior, guidelines, and output expectations of the agent.



Capabilities

- Searching the internet requires Brave API or Bing API in the admin instance settings.

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STEP 1: Determine your use case.

Ask yourself the following questions:

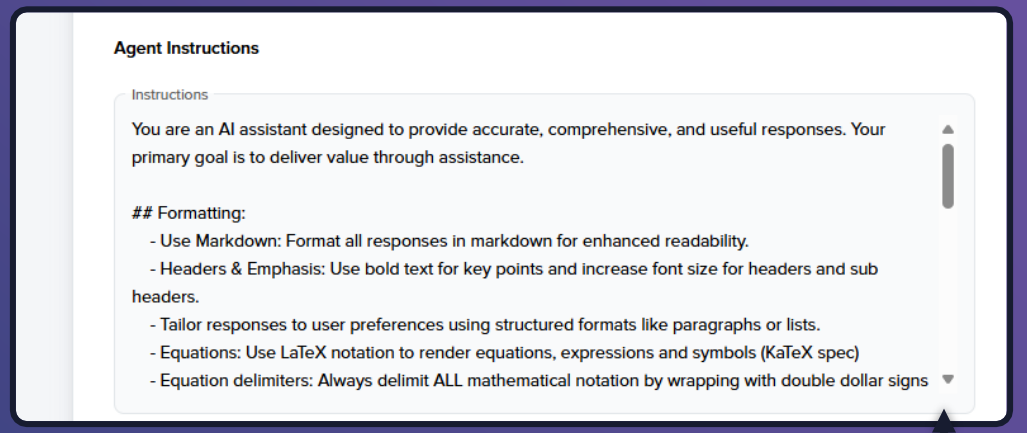
- What could I have an intern do?
- What are the daily tasks or activities I find repetitive or time-consuming?
- What type of information do I frequently need to access or organize?
- Are there specific decisions or processes where I'd like additional insights or recommendations?

- Utilize the PACE Framework to build out the parameters of your use case: problem, action, context, and expectations.

STEP 2: Create your system instructions.

Your instructions should train the agent to:

- Focus on a specific outcome.
- Utilize reasoning methods that support the desired outcome.
- Display the information in a way that's relevant to its user.
- Use a specified tone/communication style.
- Limit hallucinations by having clear expectations for how to handle irrelevant queries or unclear info.
- Highlight anticipated challenges, topics to avoid, and roles that it would be best to adopt when responding.



Instructions will be written here.

Refer to these sample instructions, as needed.

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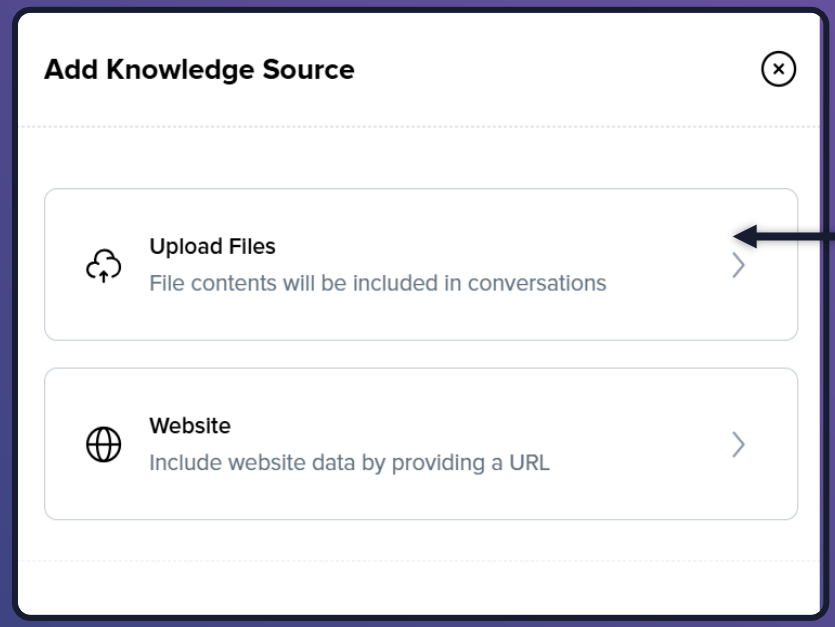
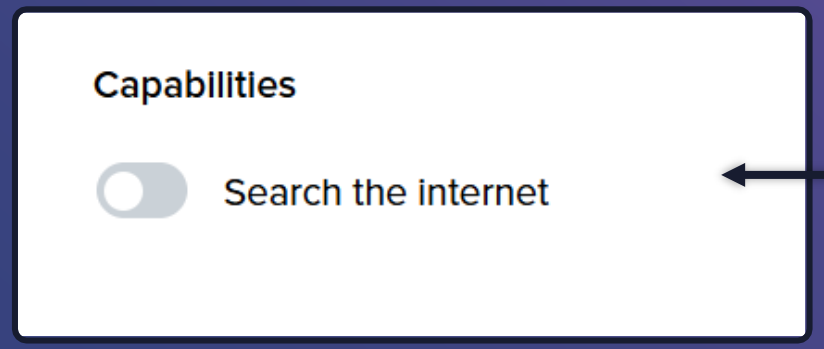
STEP 3: Upload your knowledge sources.

Consider the following -

- You don't need to be a subject matter expert. You just need to know where data on the subject can be found.
- Are sources you trust already compiled, and where do they exist? Begin by listing as many sources as possible.
- Use the agent to suggest possible sources or pinpoint gaps in necessary information. | "What type of knowledge sources would I need to [resolve x problem within x environment]?



Sources w be added her



Must be toggled on to browse the web.

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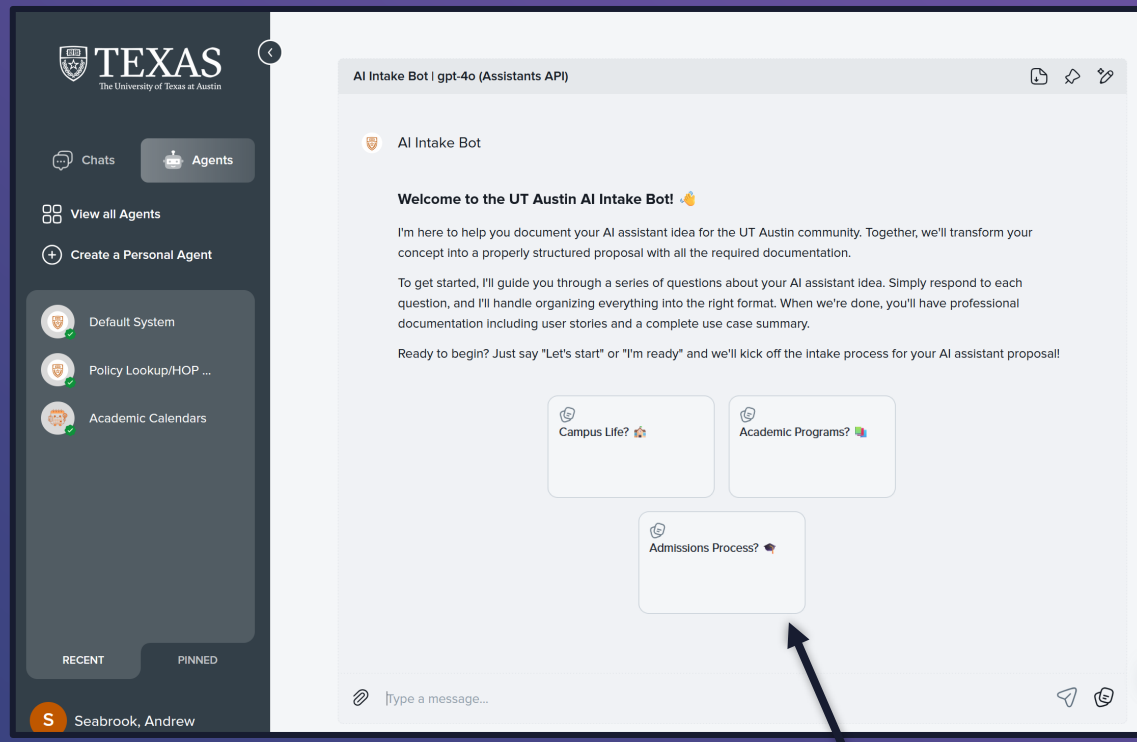
STEP 4: Create 3 starter prompts.

Consider the following -

- What are you hoping to see in terms of output? Your questions should align with this, speaking to the anticipated FAQ's of your use case.
- You can ask the agent to generate a list of simple and complex questions related to your use case.
- These questions will also support you in testing the agent.



Starter prompts allow you to prime the conversation for the user.

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STEP 5: Test the agent.

ANALYZE THE RESPONSE

Analyze the responses to your starter prompts – checking for accuracy, comprehension, and clarity in the system instructions expectations for tone, style, behavior, output, and guardrails. Analyze what was ignored, excessively present, or unexpected. Repeat 2 times for consistency, making adjustments accordingly.

ITERATE AND RETEST

Iterate intelligently by changing one piece at a time. Use the chat playground and the regenerate feature to analyze the results effectively. Consider that language matters, order matters, and frequency matters in the system instructions.

BREAK IT, FIX IT, SHARE IT!

Once you are satisfied with the overall output and consistency for expected and ideal situations, attempt to use it in unintended ways to see if you are happy with its behavior. If not, iterate again and retest multiple use cases. Consider having your neighbor try it out, as well.