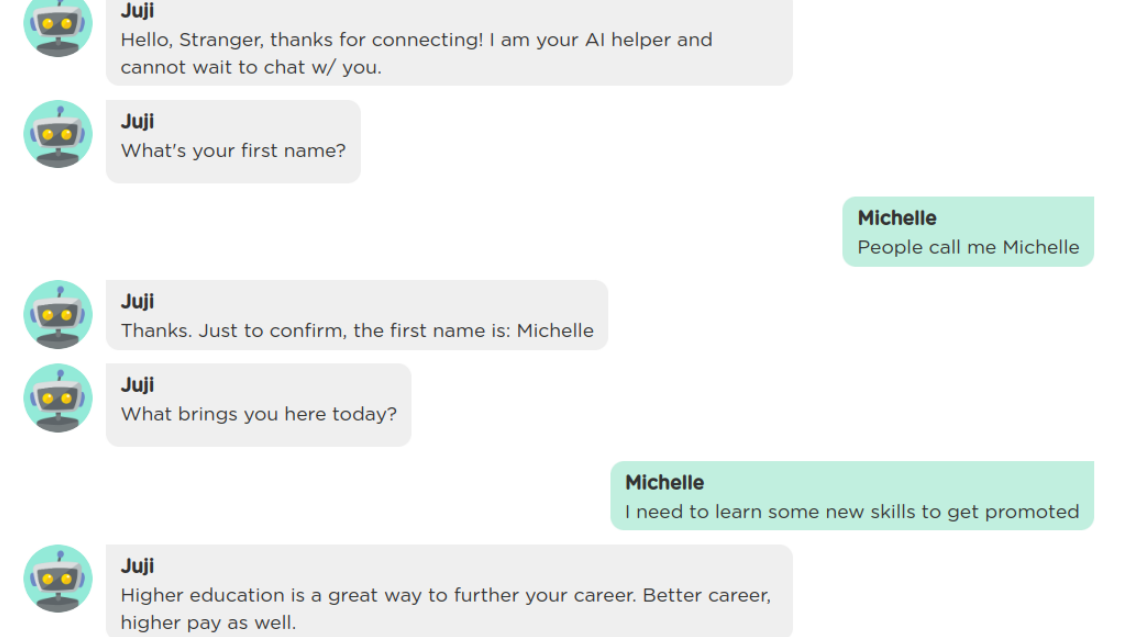
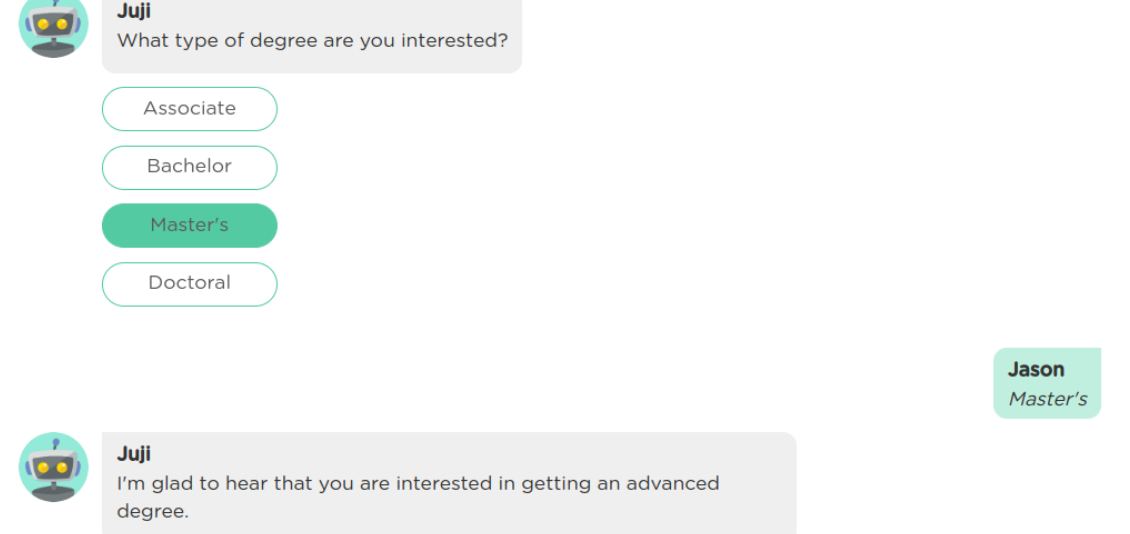
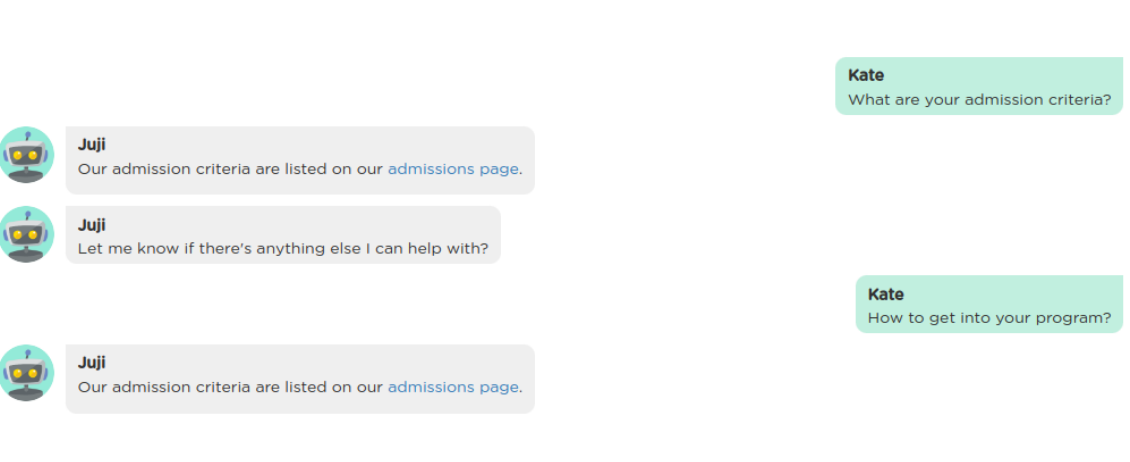
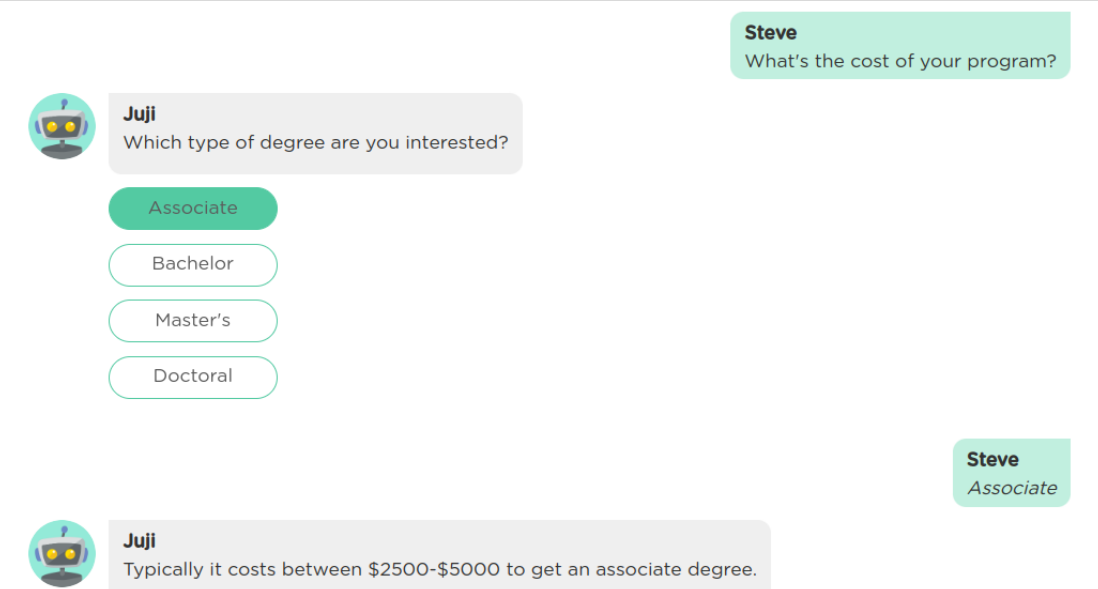
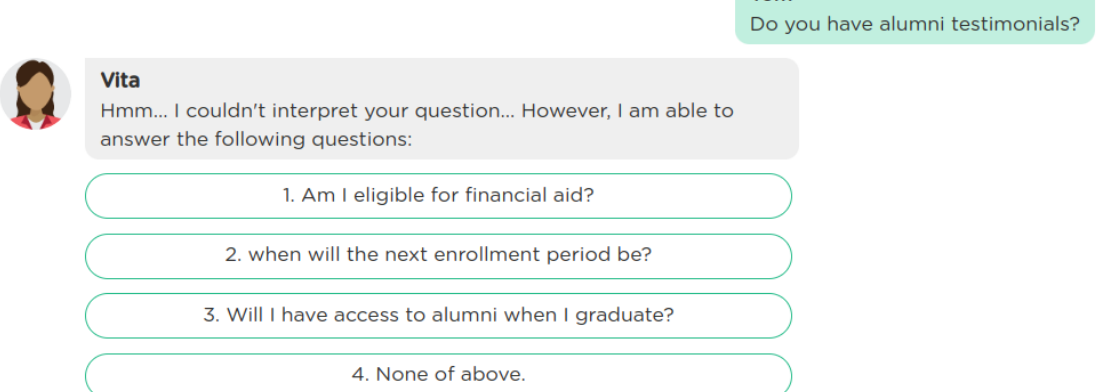
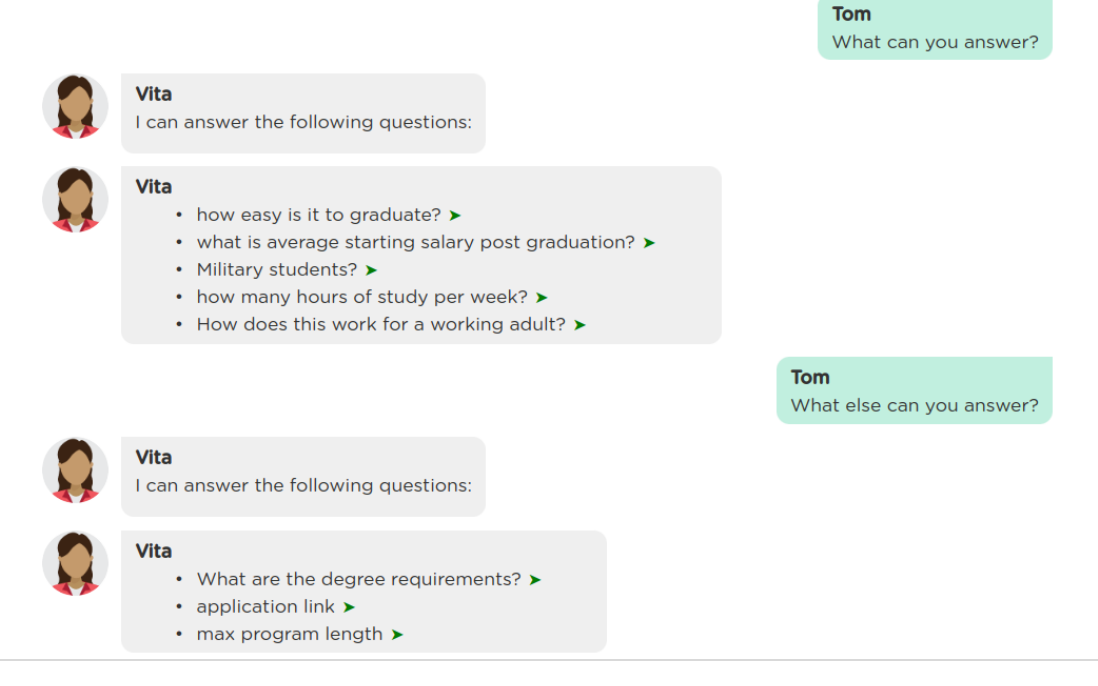
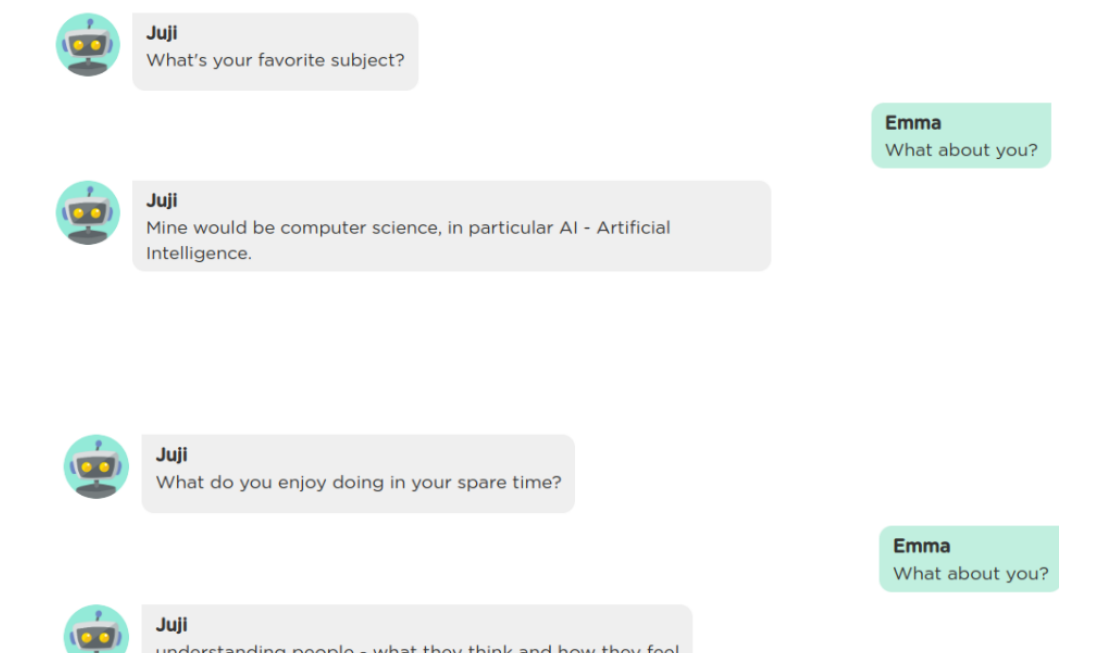
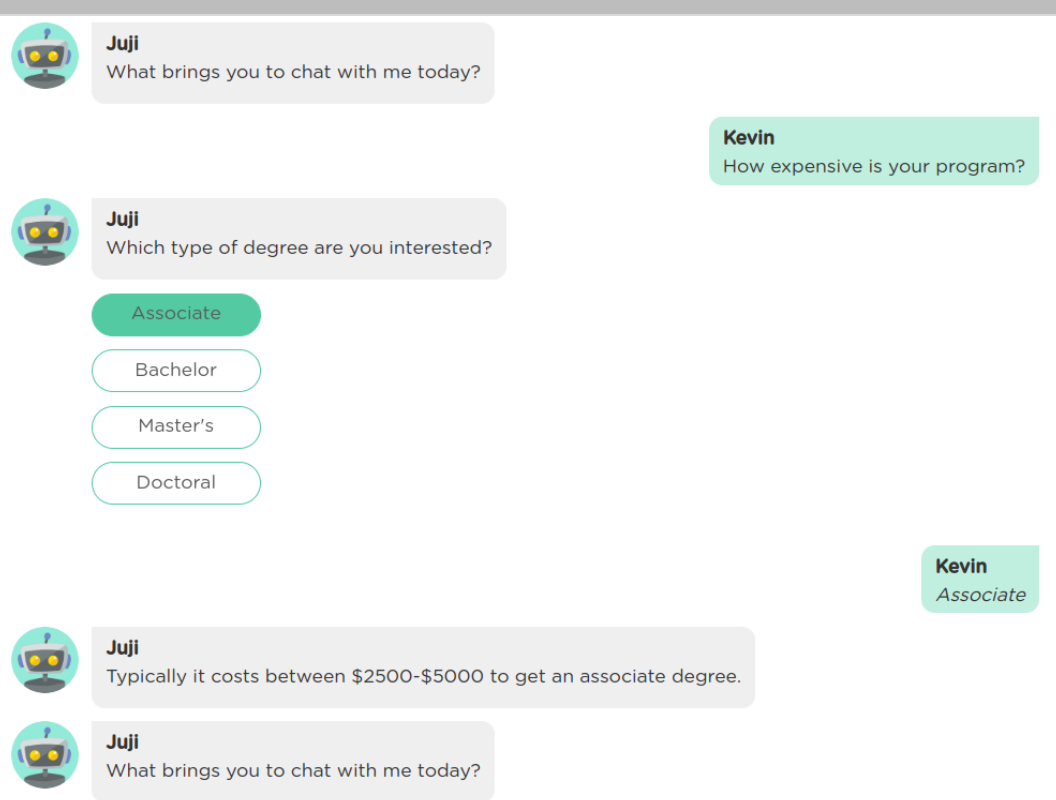
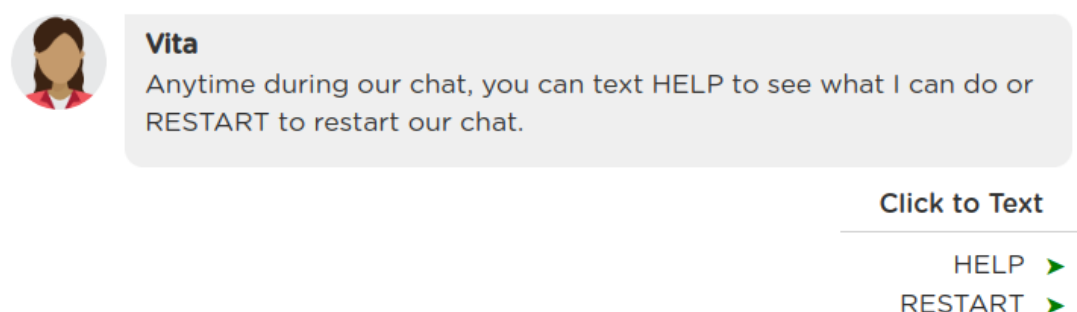

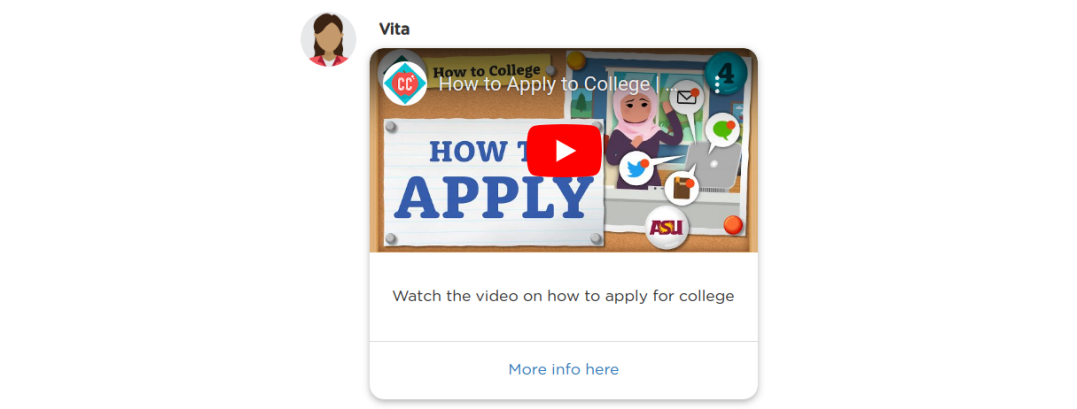
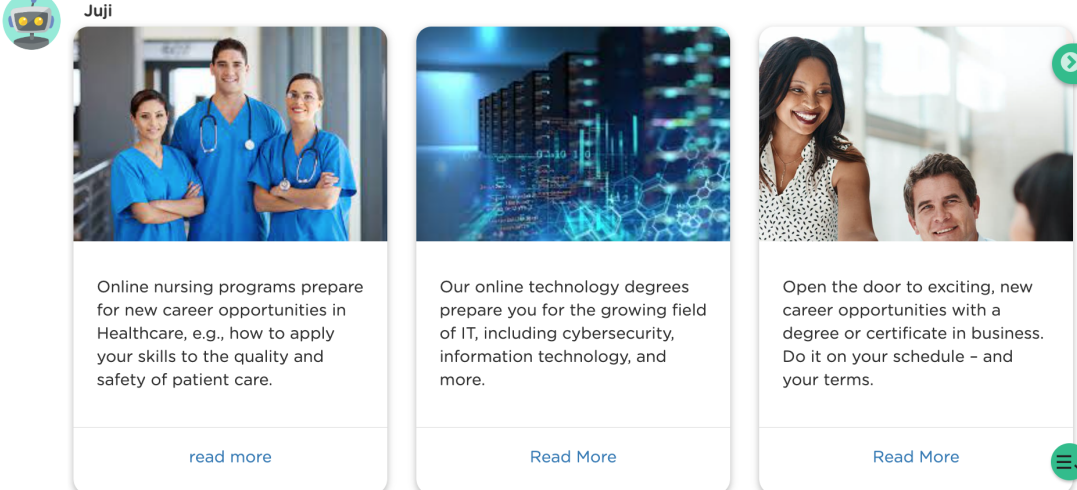
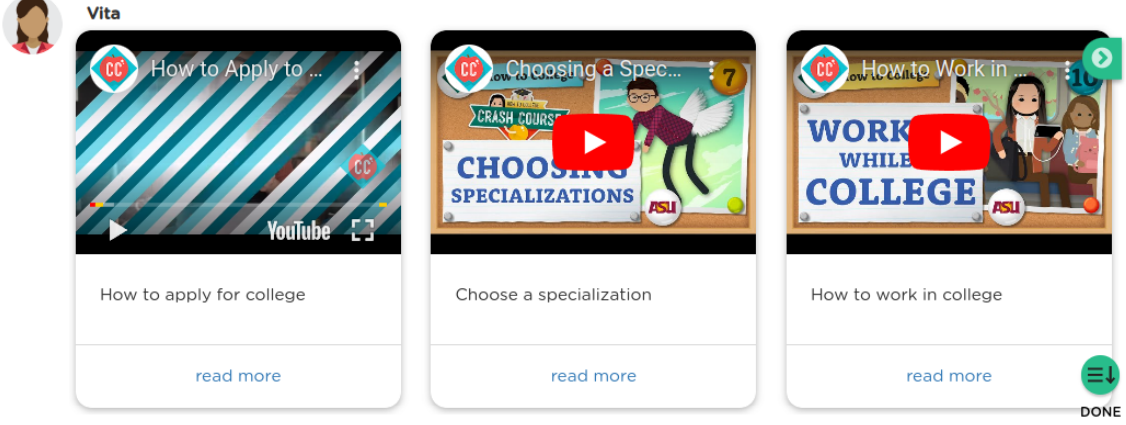
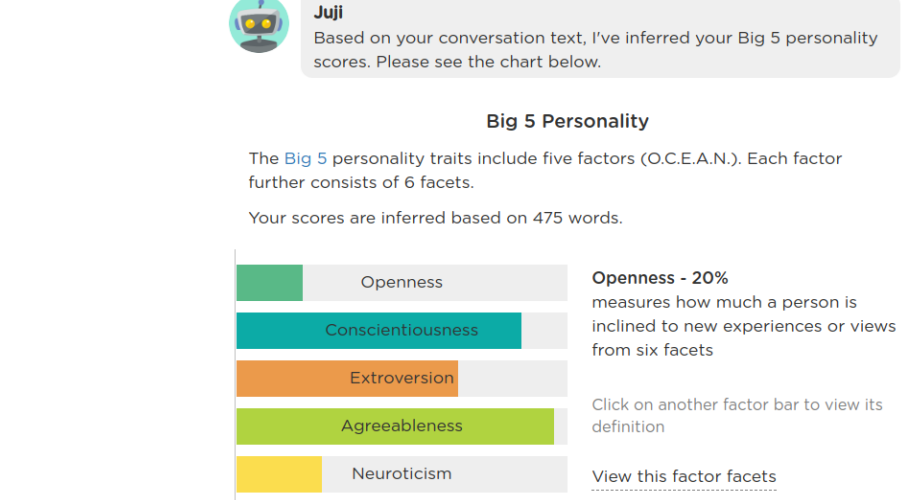
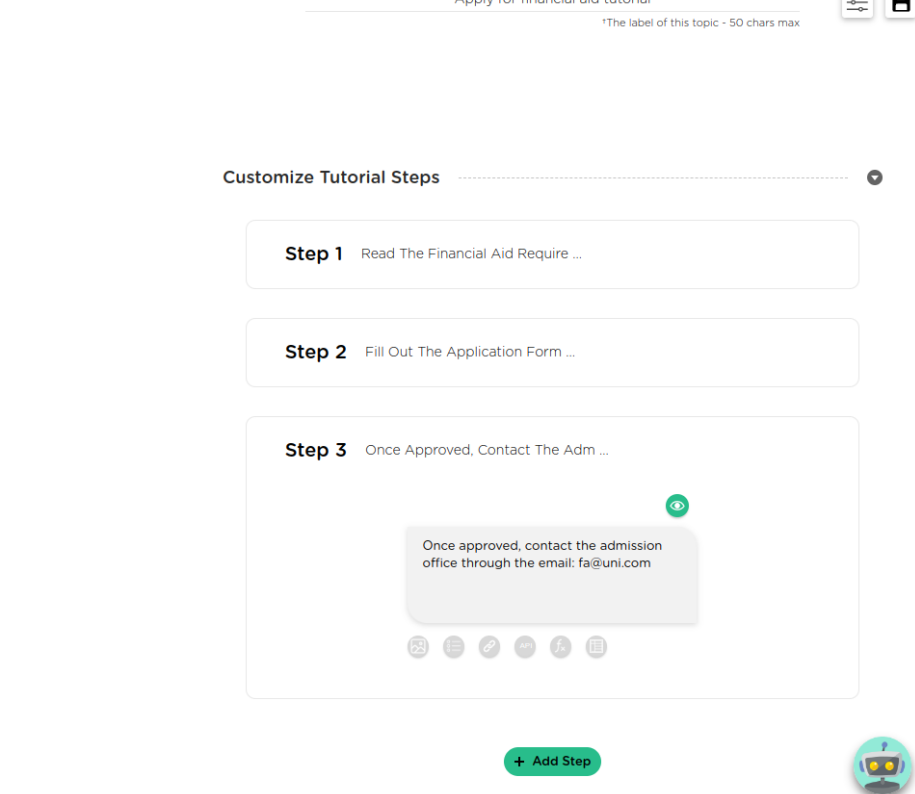
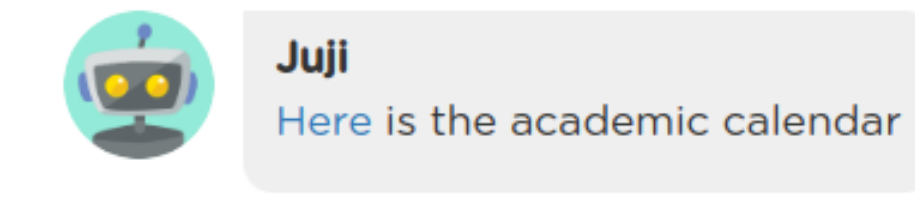
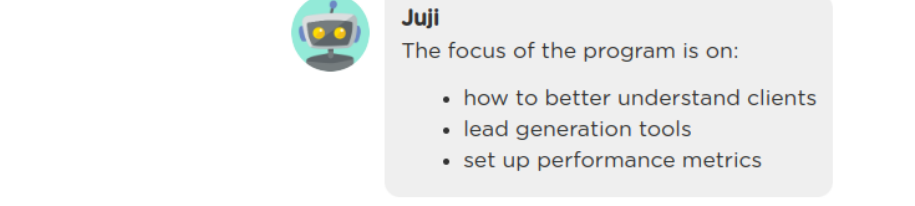
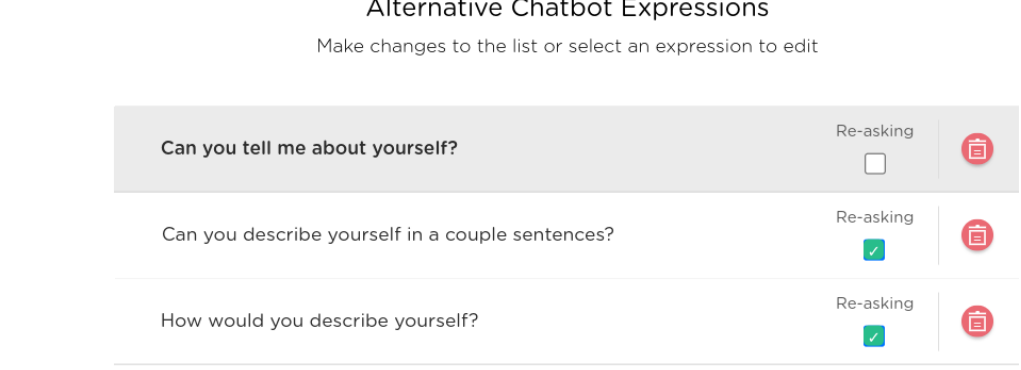
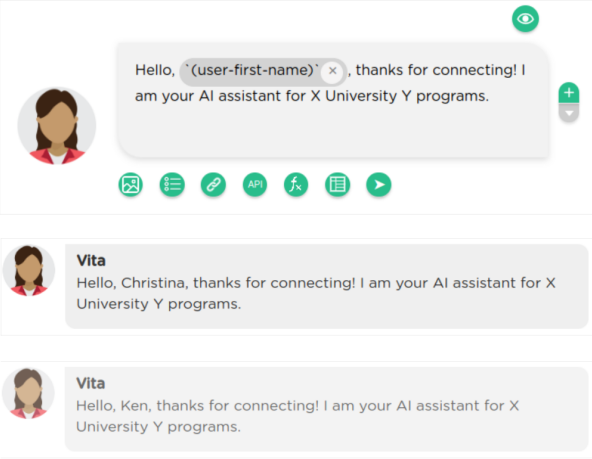
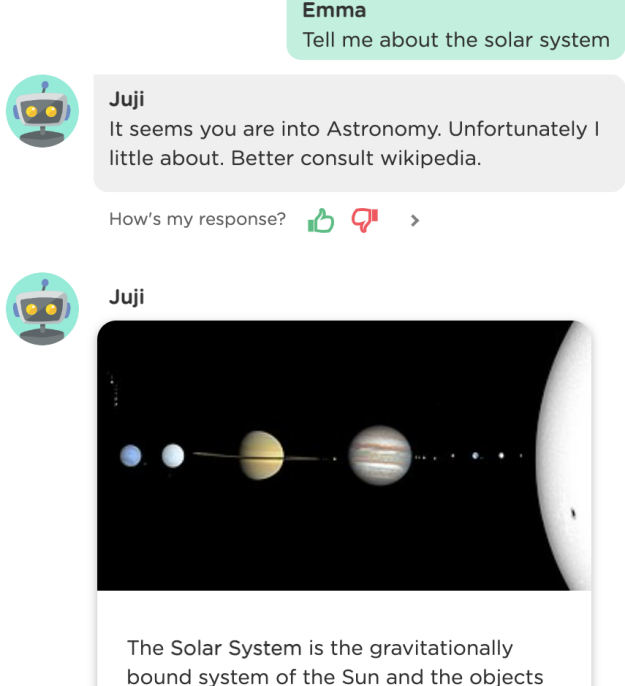
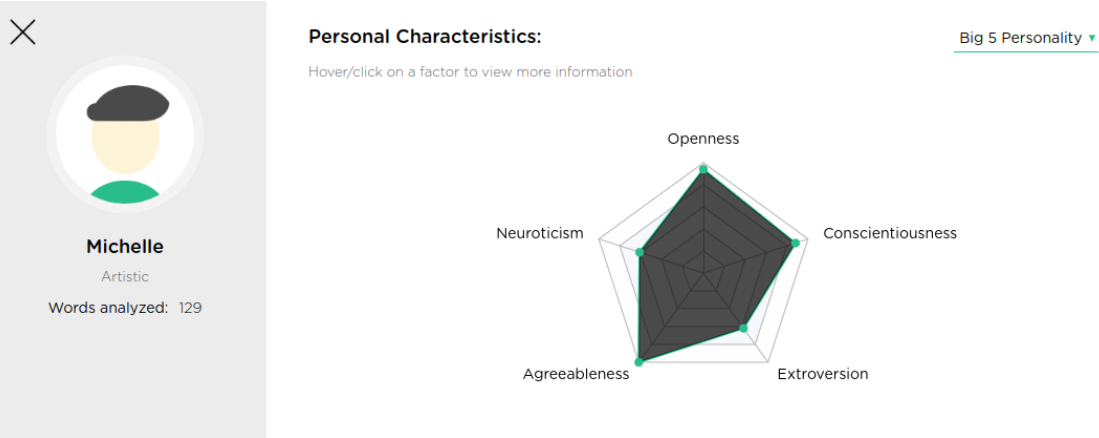
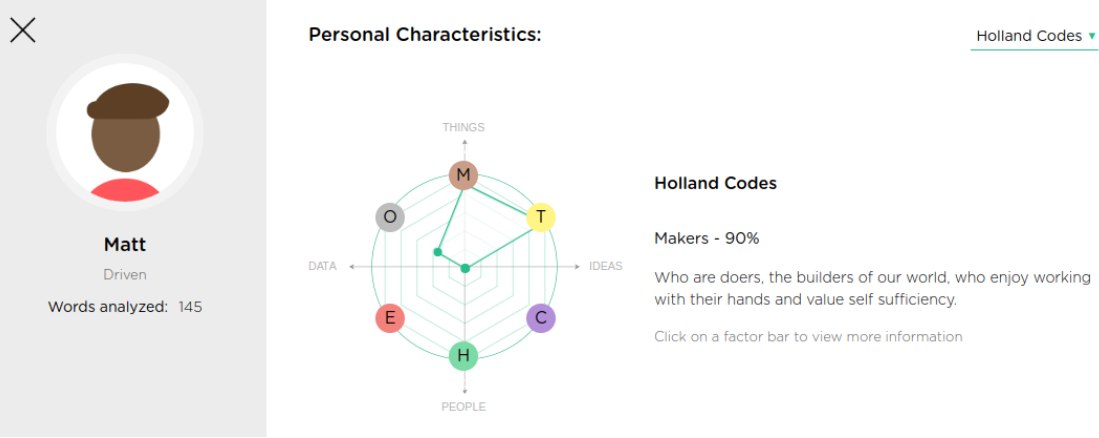


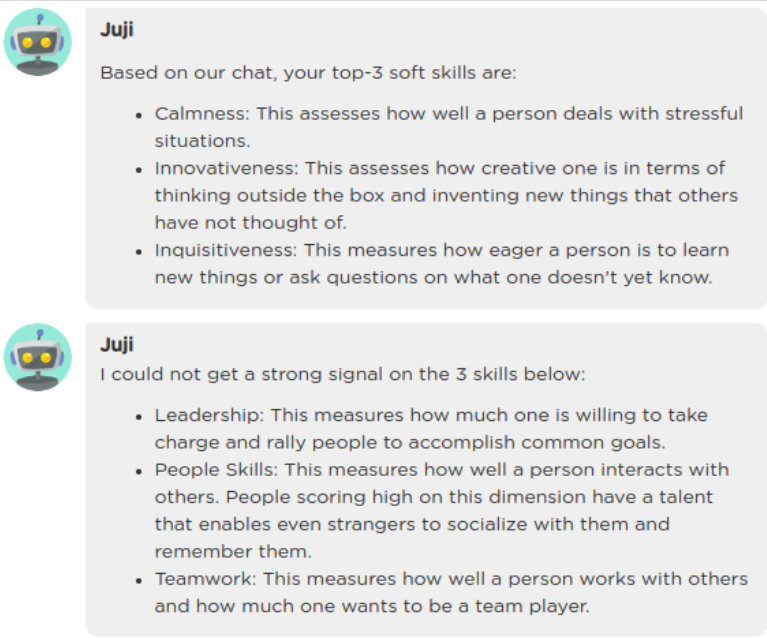
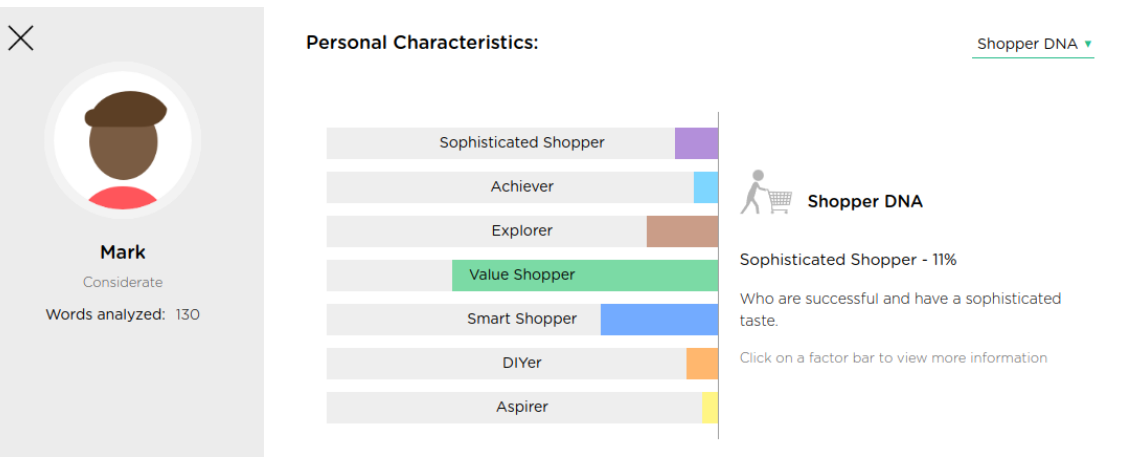
Key Capabilities	Synopsis	Examples
I. User Experience and Business ROI	A chatbot or conversational AI agent is meant to scale out human engagements (e.g., universities with prospective and existing students) through a conversation. A key factor to evaluate a chatbot platform is to assess how well a chatbot engages with a user and delivers satisfactory user experience as well as maximize business ROI, such as improving prospective student conversion rate and existing student retention rate. Use the following factors to evaluate a chatbot performance in delivering satisfactory customer experience and achieving intended business values. In addition to evaluating chatbot features, gathering direct user ratings and feedback would be another way to assess this dimension.	
1.1 Empathetic and Productive Two-Way Conversations	Humans enjoy an empathetic and productive conversation no matter whether they are interacting with another human or an AI. Such a conversation should always be two-way exchanges instead of a one-way monologue (e.g., user asks questions and a chatbot passively answers; or a chatbot asks questions and take in whatever a user says). Use the following list to test if a chatbot option has the capabilities to make a genuine two-way human-AI conversation that is also empathetic or productive.	
1.1.1 Abilities to gather quality data from users	In a two-way human-AI conversation, one key use of a chatbot is to gather information from users, e.g., prospective or existing students. This helps organizations like educational institutes better understand their users (e.g., student interests and feedback) and plan the next best actions (e.g., helping a student submit an application or retain a student). This requires a chatbot to ask both open-ended questions to collect qualitative information as well as choice questions to collect quantitative data.	
Ask open-ended questions to gather rich, qualitative data	Evaluate how well a chatbot can ask open-ended questions and automatically interpret user free-text input to respond to users properly and also auto-extract certain data from the input (e.g., name and interest).	 <p>Juji: Hello, Stranger, thanks for connecting! I am your AI helper and cannot wait to chat w/ you.</p> <p>Juji: What's your first name?</p> <p>Michelle: People call me Michelle</p> <p>Juji: Thanks. Just to confirm, the first name is: Michelle</p> <p>Juji: What brings you here today?</p> <p>Michelle: I need to learn some new skills to get promoted</p> <p>Juji: Higher education is a great way to further your career. Better career, higher pay as well.</p>
Ask choice questions to gather quantitative data	Evaluate how well a chatbot can ask choice questions and support customized branching responses or follow-up questions based on user choice. The chatbot should also gracefully handle when a user enters something that does not match any of the choices.	 <p>Juji: What type of degree are you interested?</p> <p>Associate</p> <p>Bachelor</p> <p>Master's</p> <p>Doctoral</p> <p>Jason: Master's</p> <p>Juji: I'm glad to hear that you are interested in getting an advanced degree.</p>
1.1.2 Abilities to answer user questions	In a two-way human-AI conversation, another key use of a chatbot is to answer user (e.g., student) questions, which are typically asked diverse free-text expressions. A capable chatbot should be able to interpret these diverse question expressions and respond properly. In case the chatbot cannot respond, it should support multiple back-channel support (e.g., automatic email or SMS notification when the answer becomes available).	
Answer users' free-text questions	Evaluate how well a chatbot could interpret students' diverse free-text question expressions even for the same question.	 <p>Kate: What are your admission criteria?</p> <p>Juji: Our admission criteria are listed on our admissions page.</p> <p>Juji: Let me know if there's anything else I can help with?</p> <p>Kate: How to get into your program?</p> <p>Juji: Our admission criteria are listed on our admissions page.</p>

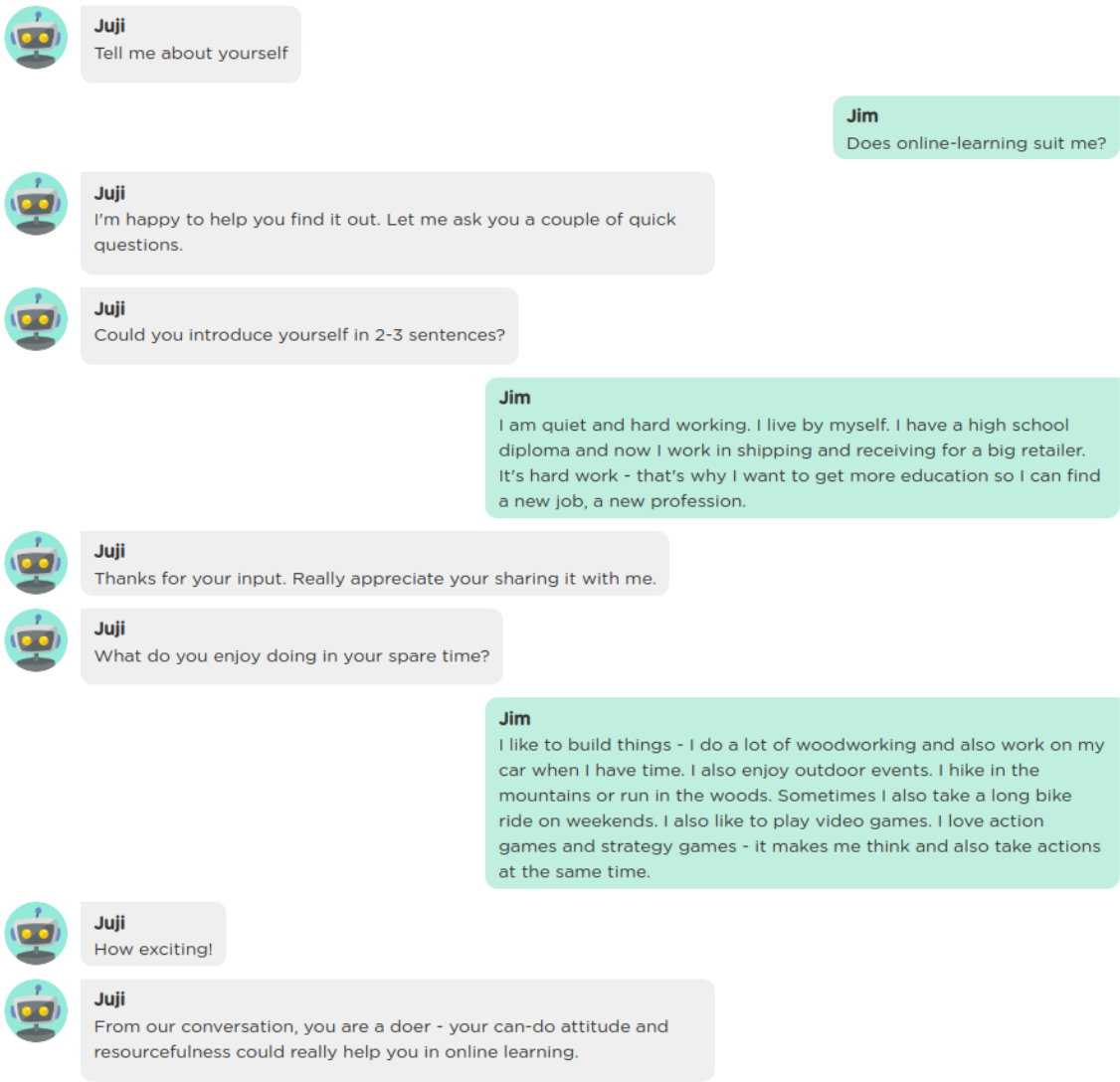
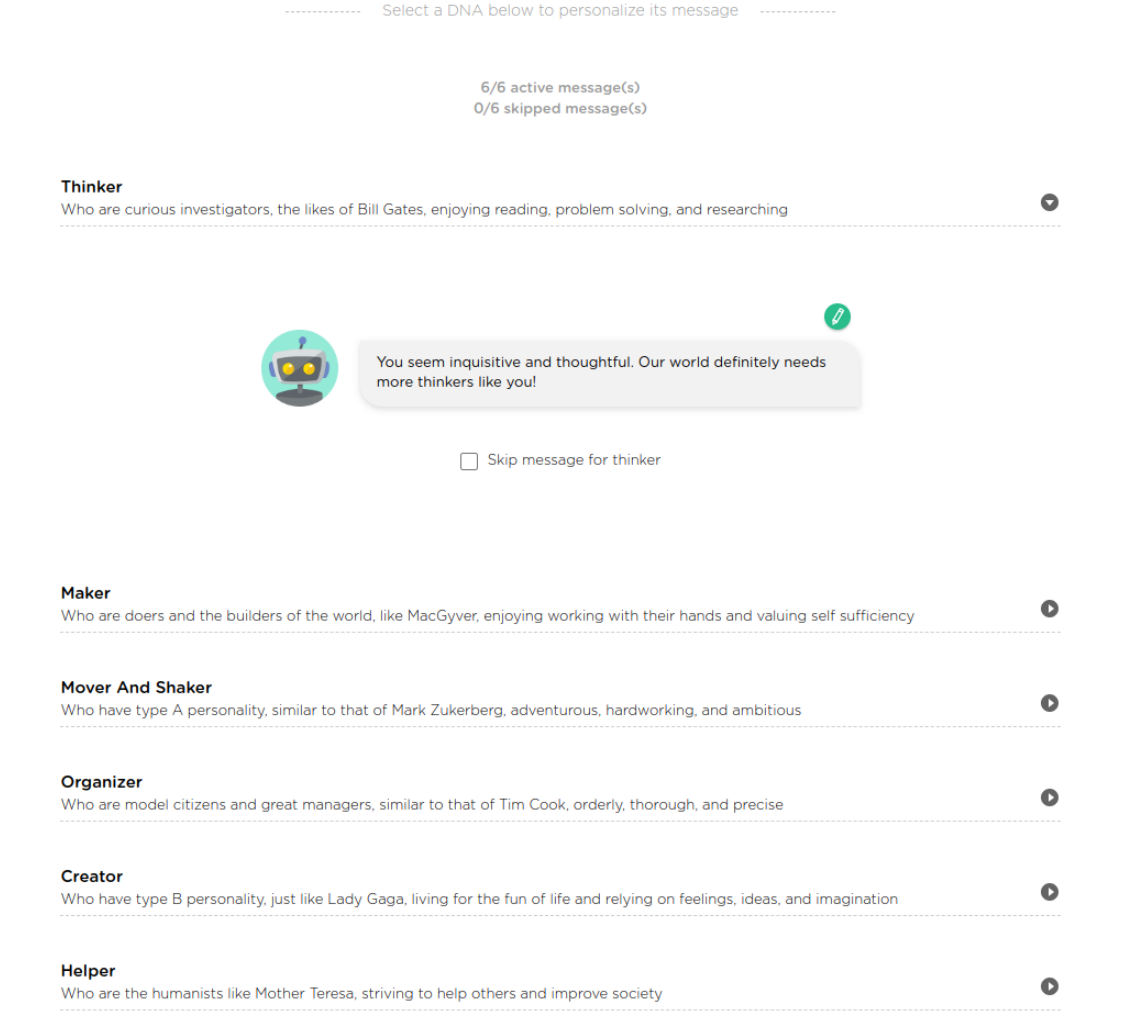
Key Capabilities	Synopsis	Examples
Answer users' complex, free-text questions.	<p>Certain user questions cannot be answered simply as the chatbot would need to gather more info from the users before answering the question, which requires multi-turn interactions. Evaluate how well a chatbot can handle such complex questions.</p>	
<p>Automatically recommend answers to similar questions.</p>	<p>When a chatbot does not have enough confidence to interpret a user question, it should inform users what its interpretation might be by automatically recommending similar questions along with their answers.</p>	
<p>Automatic "HELP" menu generation.</p>	<p>A user may not know what a chatbot can answer and a chatbot's knowledge base (KB) may be updated frequently. This convenience function allows a chatbot to automatically generate a help menu from its KB and inform users what it knows about.</p>	
<p>1.1.3 Ability to conduct context-sensitive, productive conversations</p>	<p>Just like a human-human conversation, a human-AI conversation should also be context sensitive. A chatbot should be able to interpret and properly respond to humans' abbreviated or incomplete expressions used in context. It should also handle user interruptions any time and maintain a coherent conversation context to deliver a natural and productive conversation experience.</p>	
Support context-sensitive exchanges	<p>Evaluate how well a chatbot can understand a conversation context and respond to a user's expression in context properly.</p>	

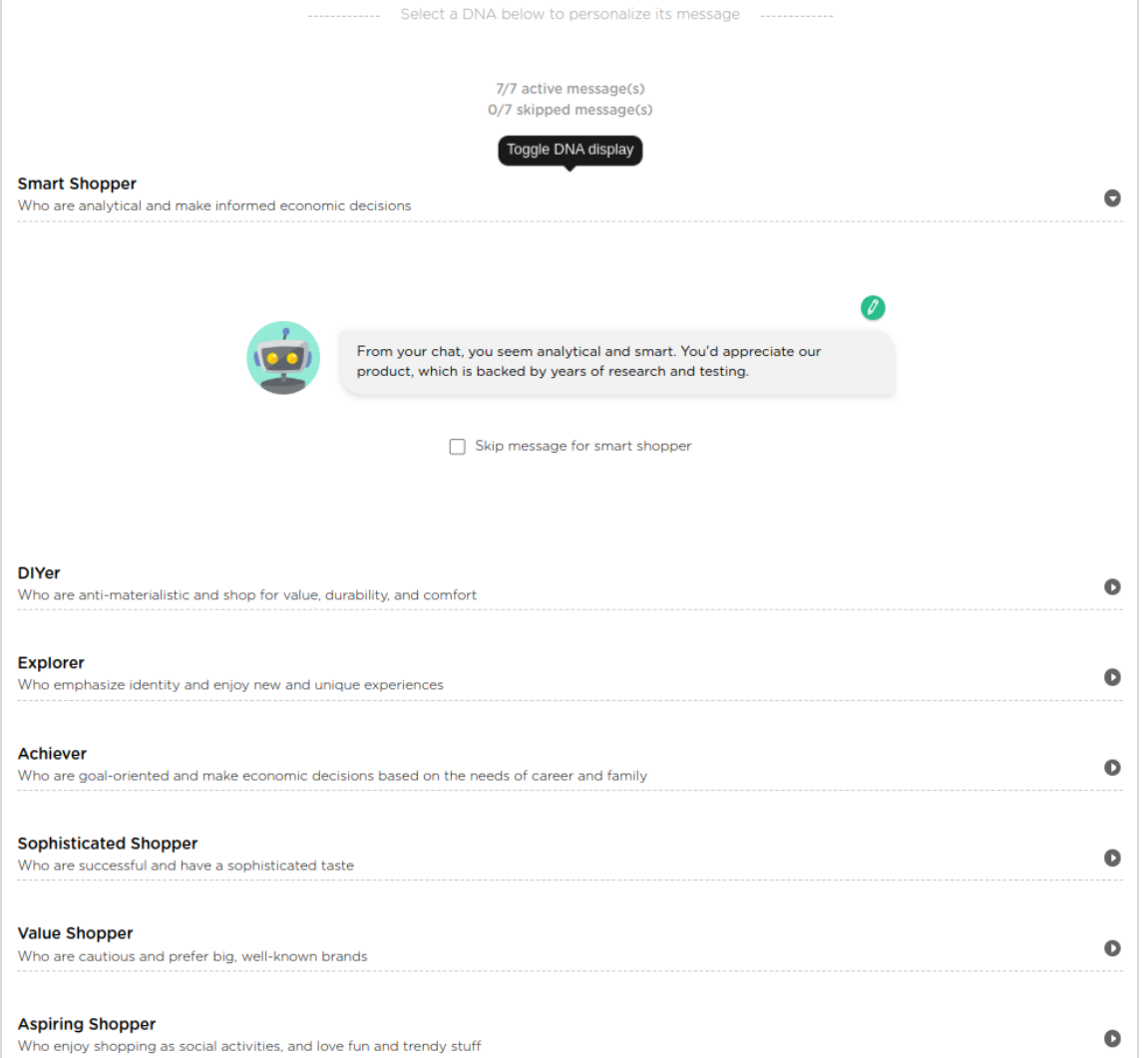
Key Capabilities	Synopsis	Examples
Support arbitrary user interruptions	Evaluate how well a chatbot can remember and maintain a conversation context by testing a chatbot's abilities to handle the interleaving of any two multi-turn questions.	
1.1.4 Abilities to use rich communication form to delight users To deliver a fun and engaging conversation and great user experience, a chatbot should be able to send messages in rich formats. Evaluate how well a chatbot supports the rich forms of a conversation by the following aspects.		
Free-text input with click to text.	Allows users to input free-text anytime during a conversation to deliver a fluid conversation experience. The auxiliary "click-to-text" allows users to send a quick reply in certain situations for efficiency of communication.	
Image Message.	Send an image message. Images can be directly uploaded and via an URL.	
Video Message	Send a video message. Videos can be played directly in a chat.	
Image Carousel	Send an image carousel with up to 5 images for info comparison.	

Key Capabilities	Synopsis	Examples
Video Carousel	<p>Send a carousel in a chat with up to 5 videos for info comparison. Videos can be directly played within a chat.</p>	
<p>Information Graphics</p>	<p>Send an information graphics in a chat to display rich information/insights.</p>	
<p>Step by Step Tutorial</p>	<p>Initiate an empathetic tutorial, the chatbot will lead the user one step at a time and give the user opportunities to ask questions at each step.</p>	
<p>Messages with Hyperlinks</p>	<p>Send a chatbot text message with hyperlinks. The hyperlinked content can be displayed either on the same webpage or a different webpage where the chatbot is installed.</p>	
<p>Messages with Bullet Lists</p>	<p>Send a chatbot text message in a bullet list.</p>	
<p>Paraphrasing of Chatbot Messages</p>	<p>Send a message or ask a question with different expressions to make a conversation more natural and engaging.</p>	<p>Alternative Chatbot Expressions</p> <p>Make changes to the list or select an expression to edit</p> 

Key Capabilities	Synopsis	Examples
Dynamic Chatbot Messages Powered by Functions	<p>Send a chatbot message customized by a function. The example on the right shows the use of function to retrieve a user's first name and call the user by his/her first name to make a message more personal and dynamic.</p>	
Dynamic Chatbot Messages Powered by API calls	<p>Send a chatbot message customized via API calls. The example shows the call of a wikipedia API to display the information about the solar systems. In an educational solution, a chatbot can make API calls to backend CMS or CRM systems like Salesforce to retrieve relevant information and answer student questions (e.g., a student's application status). Similarly, the API can also be used to store student information, e.g., a prospective student's interest and contact or an existing student's banking info update.</p>	
<p>1.2 Hyper-Personalized, Empathetic Engagements driven by Computational Psychology</p> <p>Any organizations including educational institutes hope to understand the unique needs and wants of each user and use such insights to deliver the next best actions, e.g., advising the student on program selection or encourage the student to complete his/her program. To obtain the best ROI of a chatbot solution, evaluate how well a chatbot can infer student insights from conversations and make such insights to aid human decision making (e.g., advising and coaching)</p>		
<p>1.2.1 Infer psychographic insights to deeply understand users as each unique individuals</p>	<p>One way to understand a person is through a natural, authentic conversation. A good chatbot solution should be able to read between the lines and automatically infer a user's unique psychographic characteristics, such as interests, personality, and needs, from a conversation without explicitly asking them to take a personality test. This is because traditional item-based, self-reported personality or other psychometric tests use subjective ratings and are subject to social desirability faking.</p>	
Infer Big 5 Personality Insights	<p>Evaluate whether a chatbot can auto-infer a user's 35 Big 5 personality trait scores (5 factors and 30 facets) from a conversation. The Big 5 personality model is the most widely used and well-known personality model that has shown to be related to student academic achievements and learning styles.</p>	
<p>Infer Holland Codes</p>	<p>Evaluate if a chatbot can auto-infer a user's 6 Holland Codes scores from a conversation. Holland Codes indicate one's interests especially career or learning interests.</p>	

Key Capabilities	Synopsis	Examples
Infer Soft Skills	Evaluate if a chatbot can auto-infer a user's 14 softskill scores, such as Collaboration and Resourcefulness. Such information may be used by human advisors to provide personalized learning advice or guidance.	 <p>Juji Based on our chat, your top-3 soft skills are:</p> <ul style="list-style-type: none"> • Calmness: This assesses how well a person deals with stressful situations. • Innovativeness: This assesses how creative one is in terms of thinking outside the box and inventing new things that others have not thought of. • Inquisitiveness: This measures how eager a person is to learn new things or ask questions on what one doesn't yet know. <p>Juji I could not get a strong signal on the 3 skills below:</p> <ul style="list-style-type: none"> • Leadership: This measures how much one is willing to take charge and rally people to accomplish common goals. • People Skills: This measures how well a person interacts with others. People scoring high on this dimension have a talent that enables even strangers to socialize with them and remember them. • Teamwork: This measures how well a person works with others and how much one wants to be a team player.
Infer Moral Characters	A chatbot auto-infers a user's 6 moral characters, such as Honesty and Compassion from a conversation. Such information may be used by human advisors to provide personalized learning advice or guidance.	
Infer Shopper DNA	A chatbot auto-infer a user's 7 shopping characteristics (e.g., value-based shopper vs. aspiring shopper). This type of insights can be used by human advisors to understand the motivations of a student and helps aid the student decision making (e.g., instead of advising a student who is attracted to a popular or trendy subject, advising him/her with a program that best suits his/her cognitive characteristics such as their Holland Codes).	 <p>Personal Characteristics: Shopper DNA ▾</p> <p>Mark Considerate Words analyzed: 130</p> <p>Shopper DNA Sophisticated Shopper - 11% Who are successful and have a sophisticated taste. Click on a factor bar to view more information</p>
1.2.2 Deliver genuine advices and messages to help and persuade users based on their psychographic characteristics	Messages that align with people's unique interests, psychological needs, and personality resonate better with the people. Evaluate whether a chatbot platform allows you to customize chatbot messages based on a user's interests, psychological needs, and personality.	

Key Capabilities	Synopsis	Examples
<p>Hyper-personalized messages per Big 5 Personality</p>	<p>A chatbot sends hyper-personalized messages and advices to students based on their inferred Big 5 personality trait scores.</p>	 <p>The screenshot shows a chat interface with two characters: Juji (a blue robot icon) and Jim (a green speech bubble). Juji's messages include: "Tell me about yourself", "I'm happy to help you find it out. Let me ask you a couple of quick questions.", "Could you introduce yourself in 2-3 sentences?", "Thanks for your input. Really appreciate your sharing it with me.", "What do you enjoy doing in your spare time?", "How exciting!", and "From our conversation, you are a doer - your can-do attitude and resourcefulness could really help you in online learning." Jim's responses include: "Does online-learning suit me?", "I am quiet and hard working. I live by myself. I have a high school diploma and now I work in shipping and receiving for a big retailer. It's hard work - that's why I want to get more education so I can find a new job, a new profession.", and "I like to build things - I do a lot of woodworking and also work on my car when I have time. I also enjoy outdoor events. I hike in the mountains or run in the woods. Sometimes I also take a long bike ride on weekends. I also like to play video games. I love action games and strategy games - it makes me think and also take actions at the same time."</p>
<p>Personalized message templates per Holland Code</p>	<p>This is a message template that shows how to send personalized messages based on one's inferred Holland Codes.</p>	 <p>The screenshot displays a user interface for selecting a Holland Code to personalize a message. At the top, it says "Select a DNA below to personalize its message". Below this, there are statistics: "6/6 active message(s)" and "0/6 skipped message(s)". A dropdown menu is open for the "Thinker" code, showing a description: "Who are curious investigators, the likes of Bill Gates, enjoying reading, problem solving, and researching". A message preview for the Thinker code is shown: "You seem inquisitive and thoughtful. Our world definitely needs more thinkers like you!". There is a checkbox labeled "Skip message for thinker". Below the Thinker code, other codes are listed: "Maker" (Who are doers and the builders of the world, like MacGyver, enjoying working with their hands and valuing self sufficiency), "Mover And Shaker" (Who have type A personality, similar to that of Mark Zukerberg, adventurous, hardworking, and ambitious), "Organizer" (Who are model citizens and great managers, similar to that of Tim Cook, orderly, thorough, and precise), "Creator" (Who have type B personality, just like Lady Gaga, living for the fun of life and relying on feelings, ideas, and imagination), and "Helper" (Who are the humanists like Mother Teresa, striving to help others and improve society).</p>

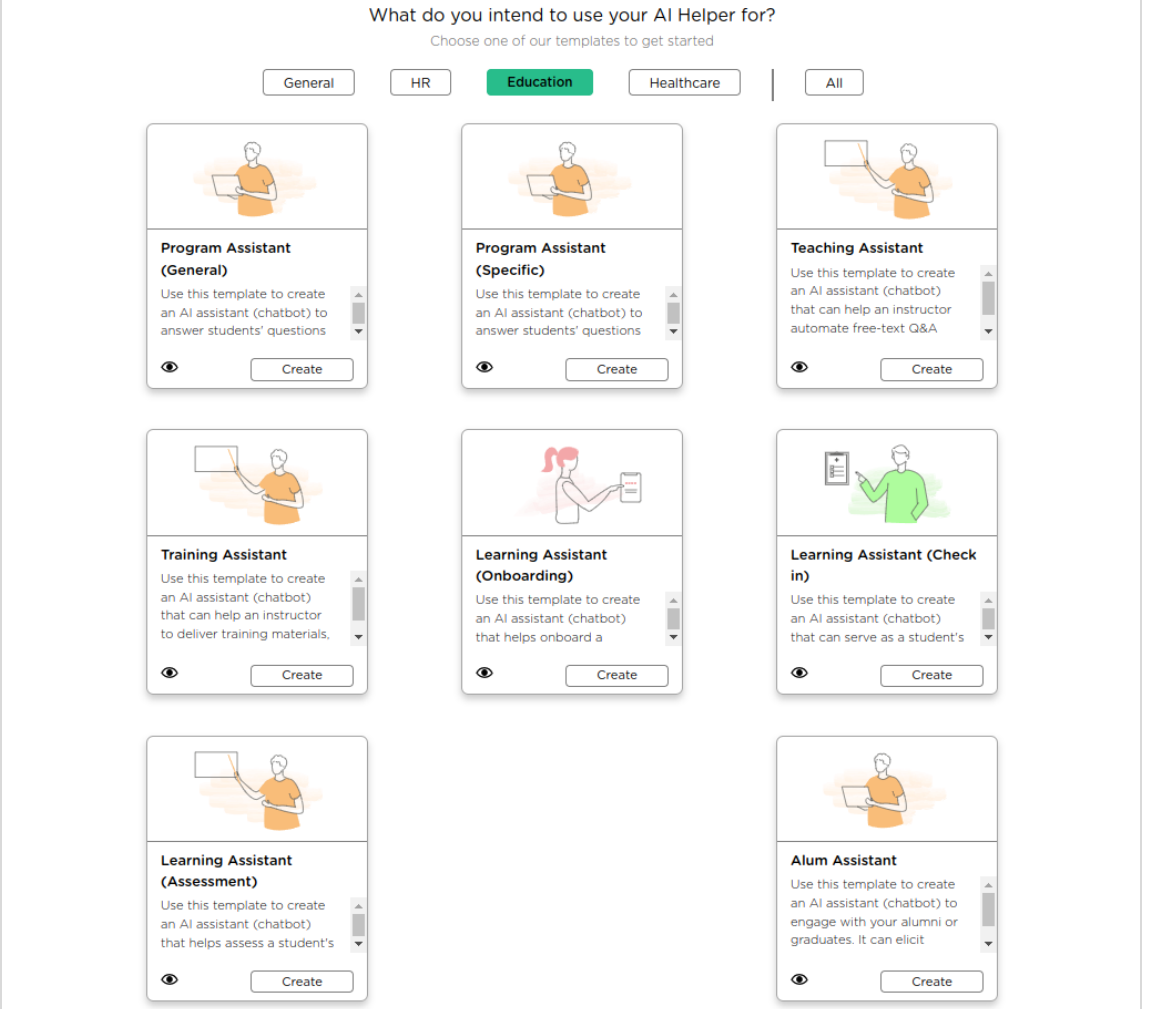
Key Capabilities	Synopsis	Examples
Personalized message templates per Shopper DNA	This is a message template that shows how to send personalized messages based on one's inferred Shopper DNA	 <p>The screenshot shows a chat interface with a header that says "Select a DNA below to personalize its message". Below this, there are statistics: "7/7 active message(s)" and "0/7 skipped message(s)". A "Toggle DNA display" button is visible. The main content area lists seven Shopper DNA types, each with a brief description and a "Create" button:</p> <ul style="list-style-type: none"> Smart Shopper: Who are analytical and make informed economic decisions DIYer: Who are anti-materialistic and shop for value, durability, and comfort Explorer: Who emphasize identity and enjoy new and unique experiences Achiever: Who are goal-oriented and make economic decisions based on the needs of career and family Sophisticated Shopper: Who are successful and have a sophisticated taste Value Shopper: Who are cautious and prefer big, well-known brands Aspiring Shopper: Who enjoy shopping as social activities, and love fun and trendy stuff

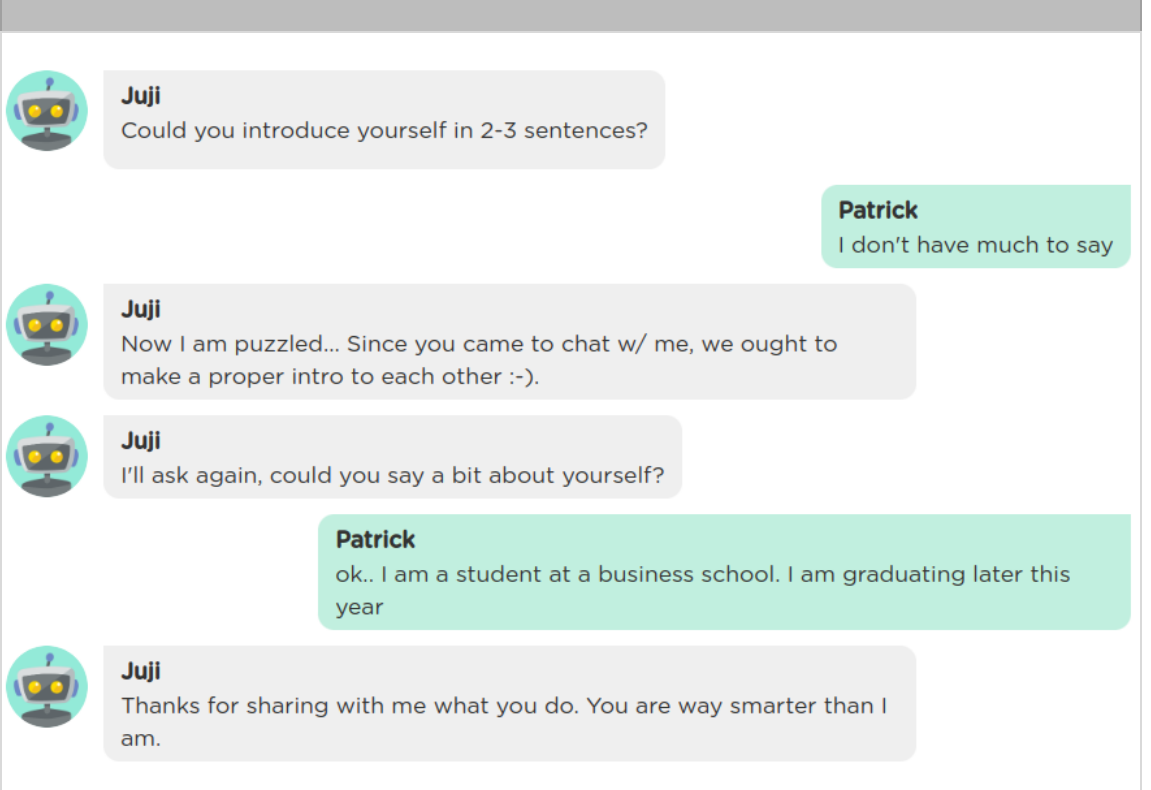
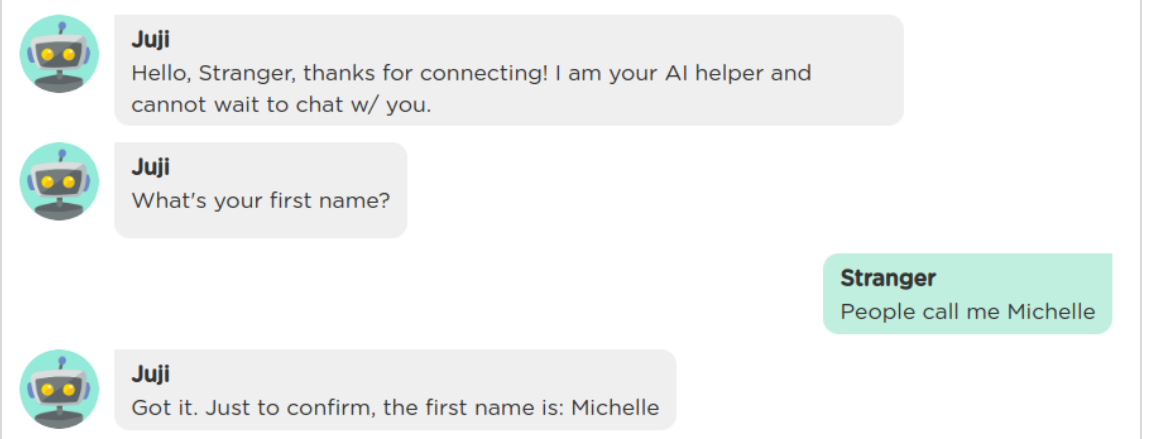
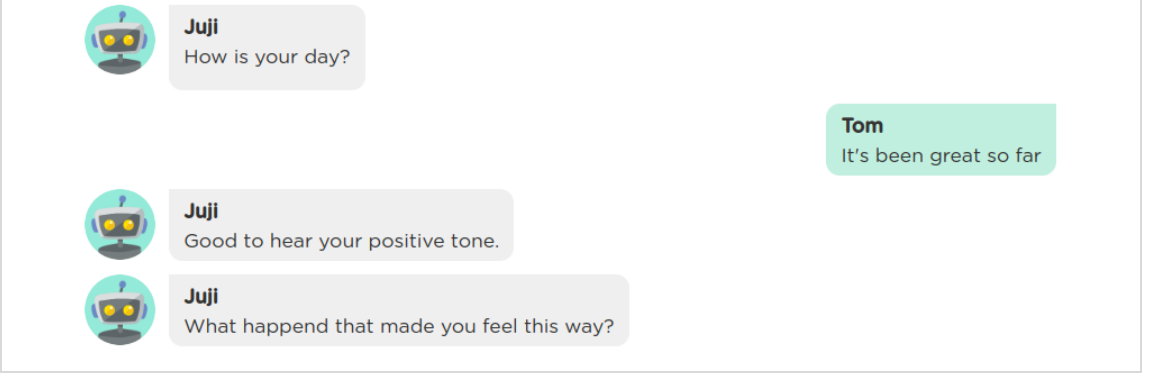
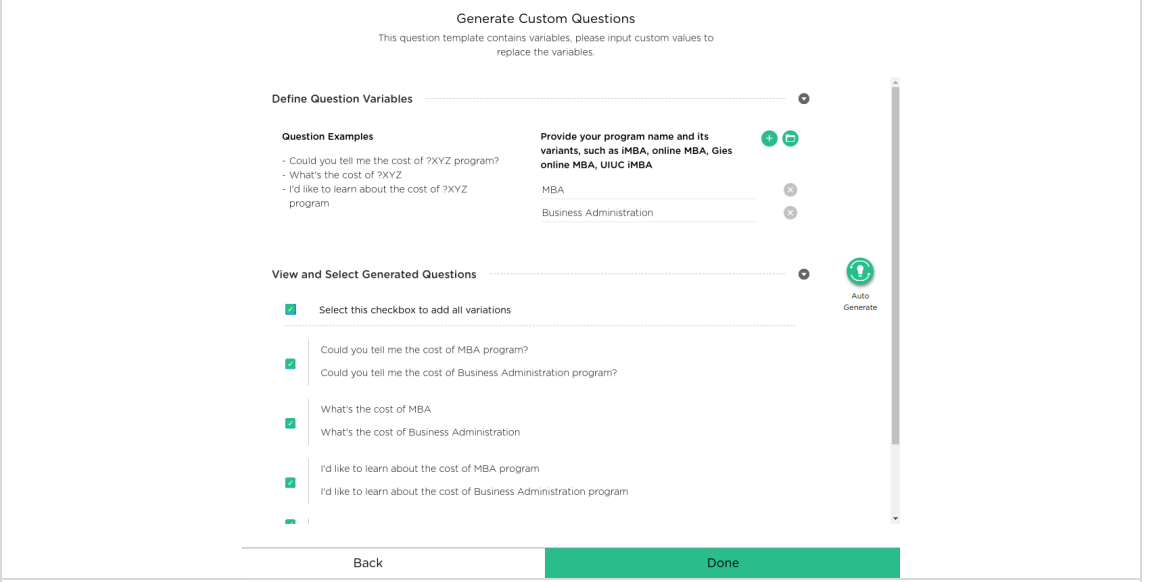
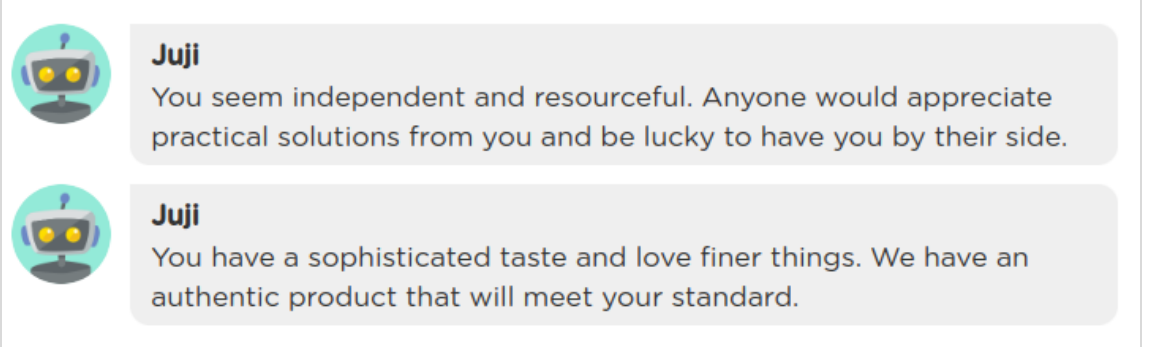
II. Time to Value and Cost of Ownership: Chatbot Customization, Testing, and Deployment

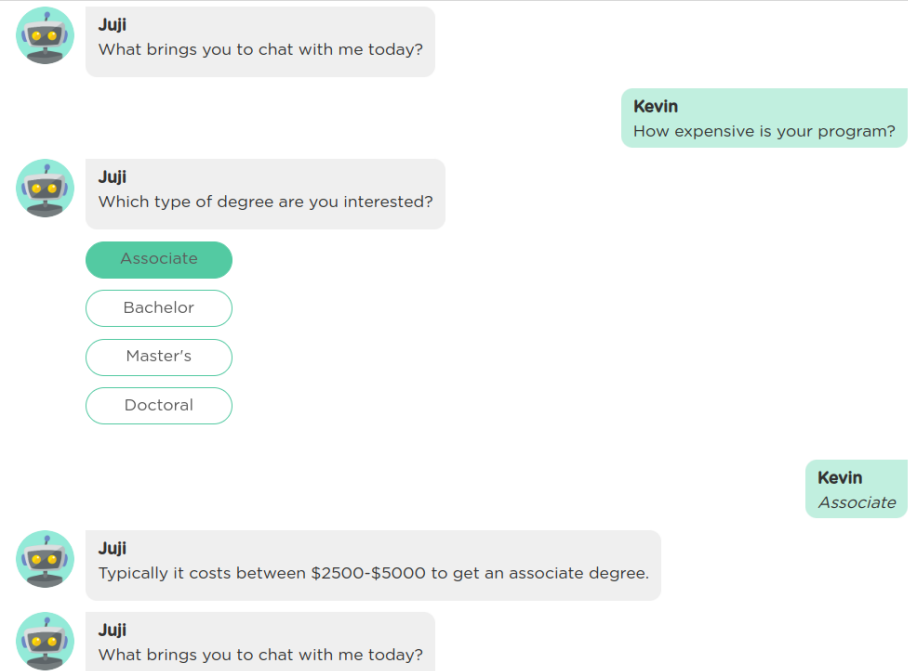
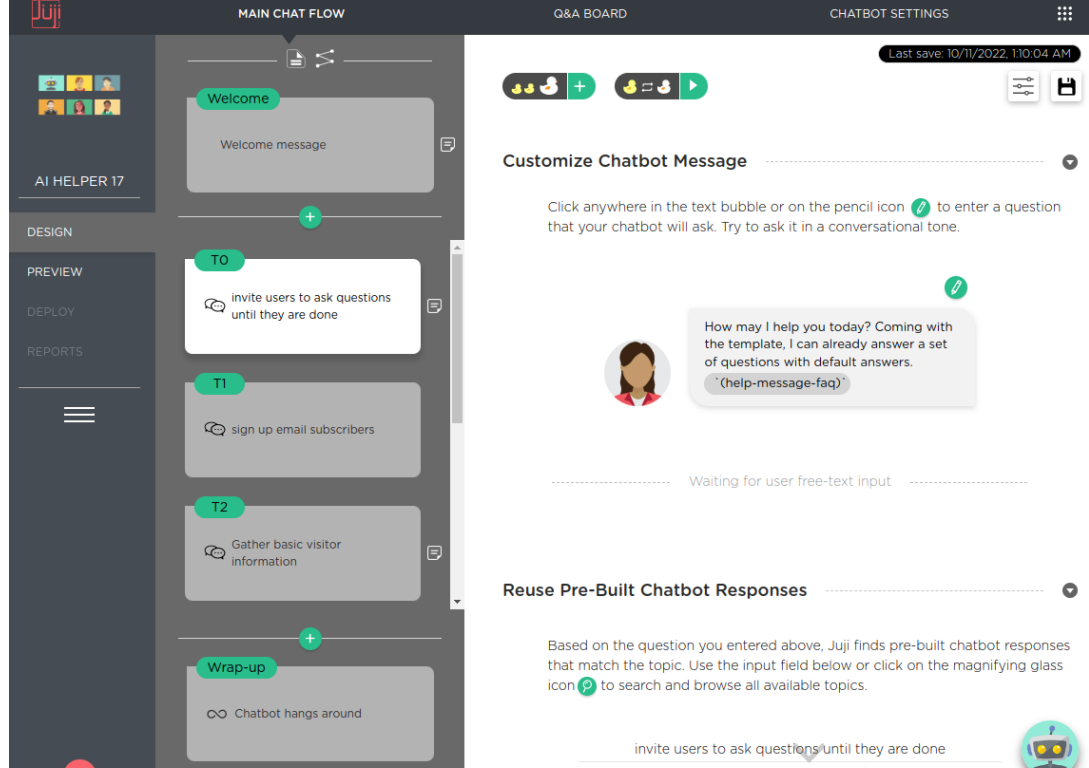
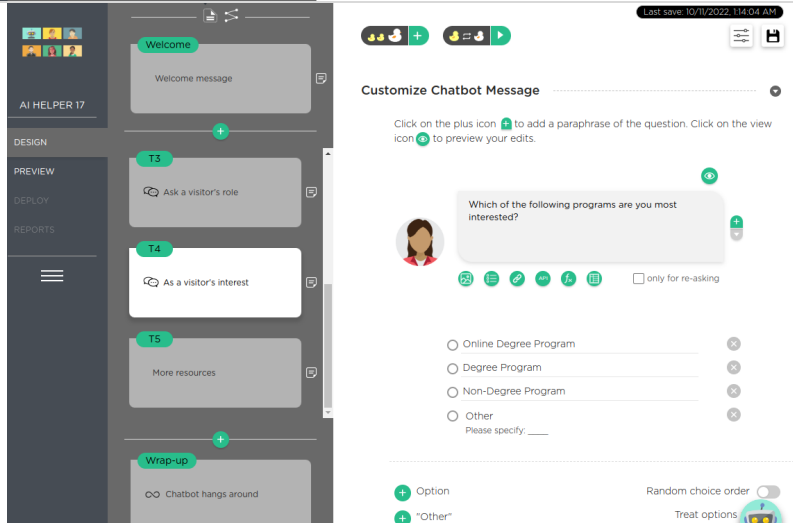
Building and owning a chatbot solution especially for an organization like educational institutes is not a trivial task. To evaluate if an organization can take on such a task, it is good to evaluate "time to value" as well as "cost of ownership" of a chatbot solution. "Time to value" assesses how fast an organization can build, test, and deploy a chatbot solution on a platform to deliver value (e. g., helping students), while "Cost of ownership" measures how much would be the cost (now and future) for an organization to build, deploy, and manage the chatbot solution and what resources are required to do so. Use the following aspects to assess these two factors.

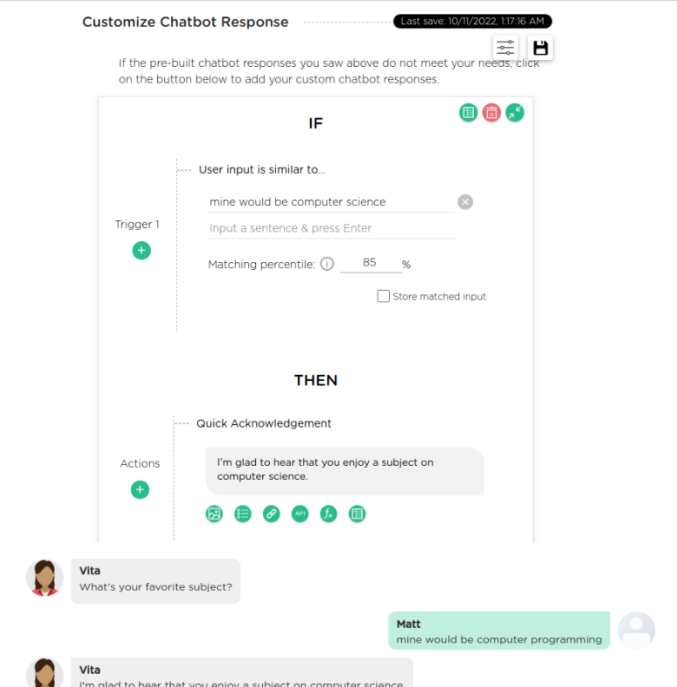
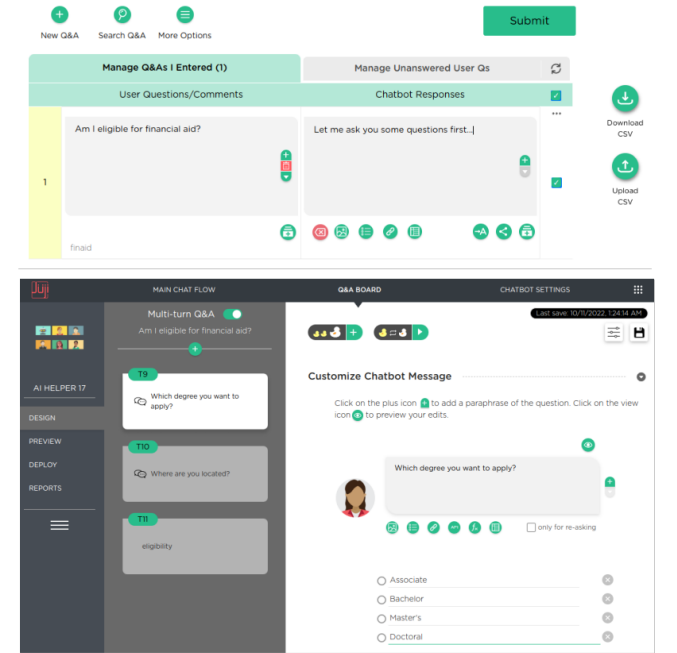
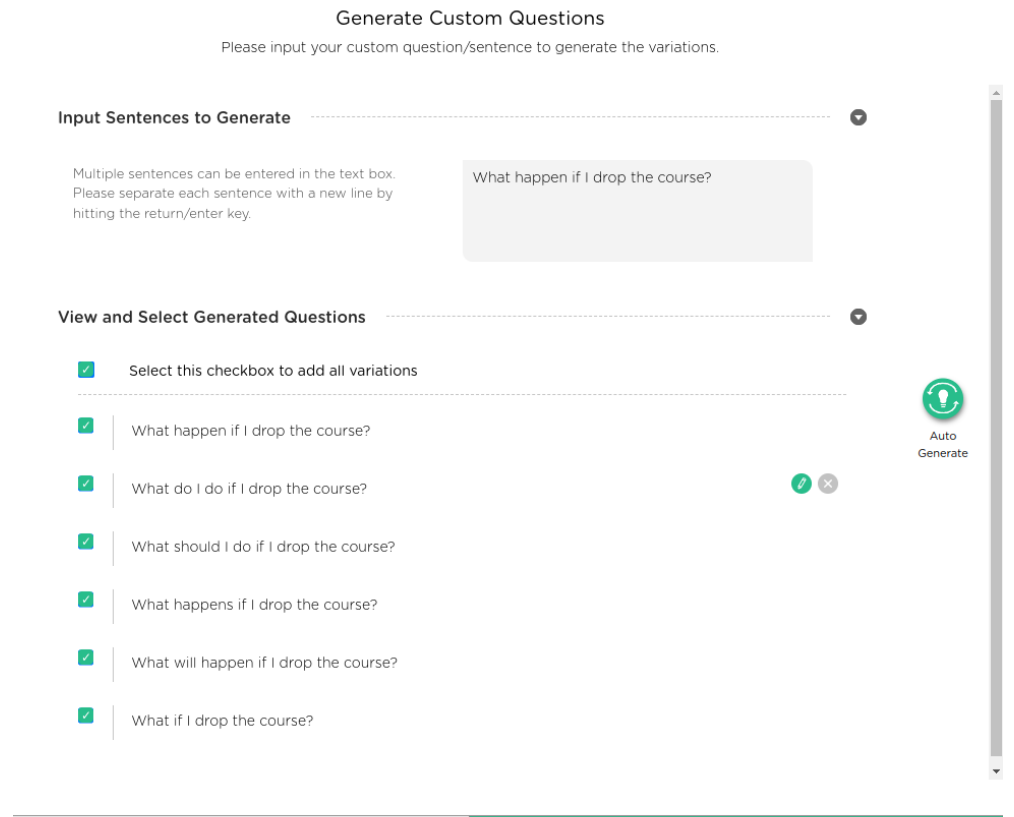
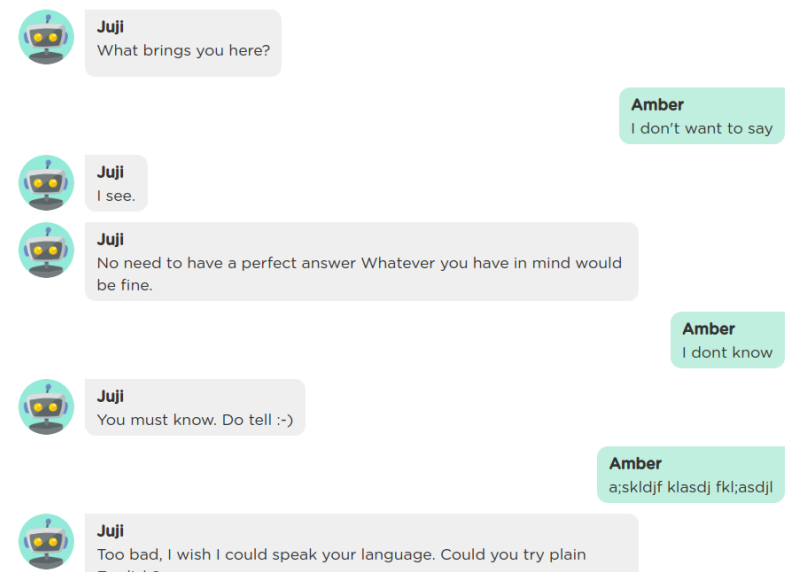
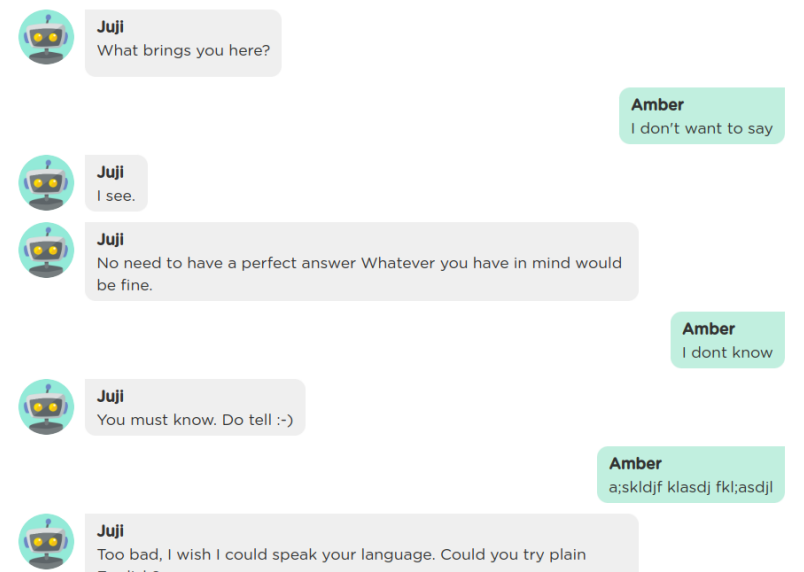
2.1 Reusable Conversational AI

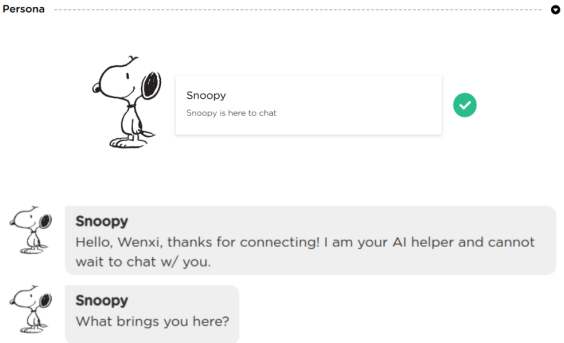
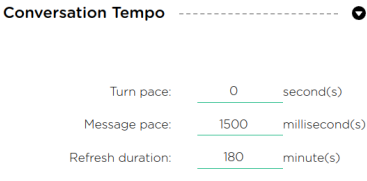
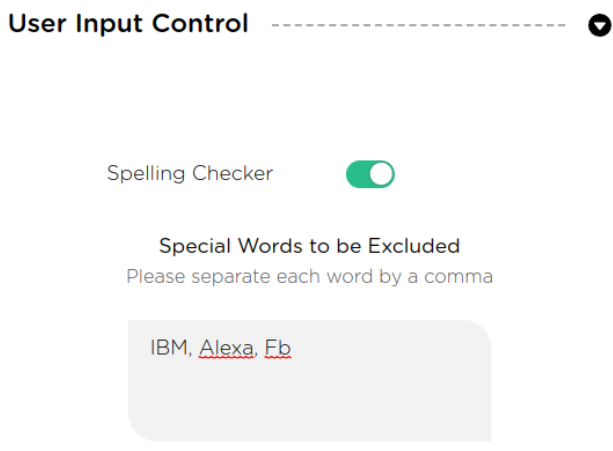
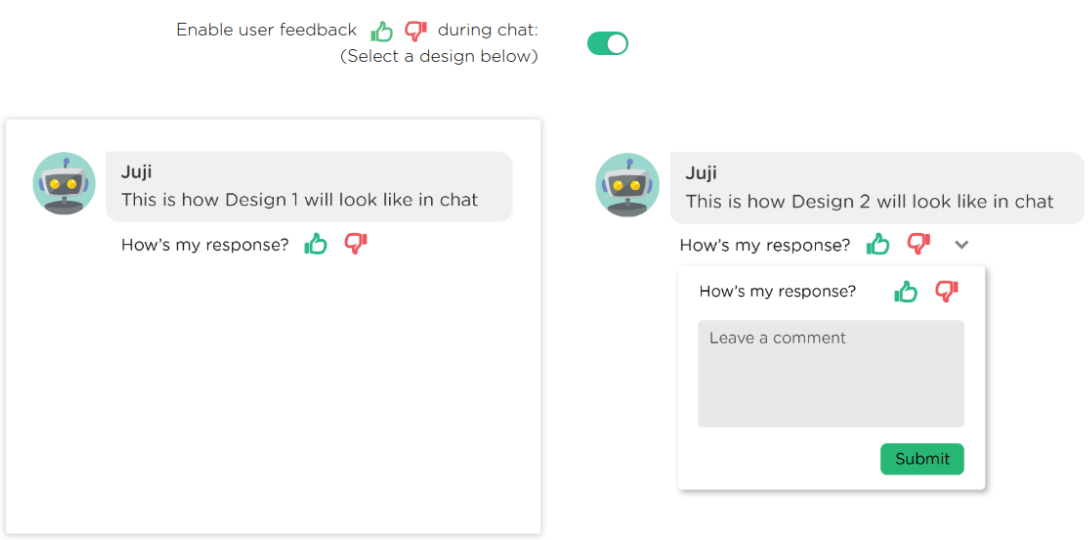
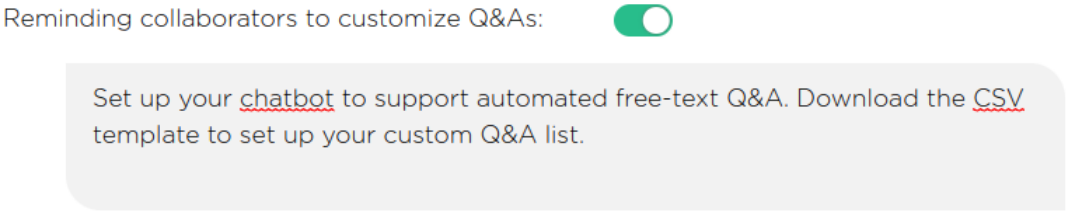
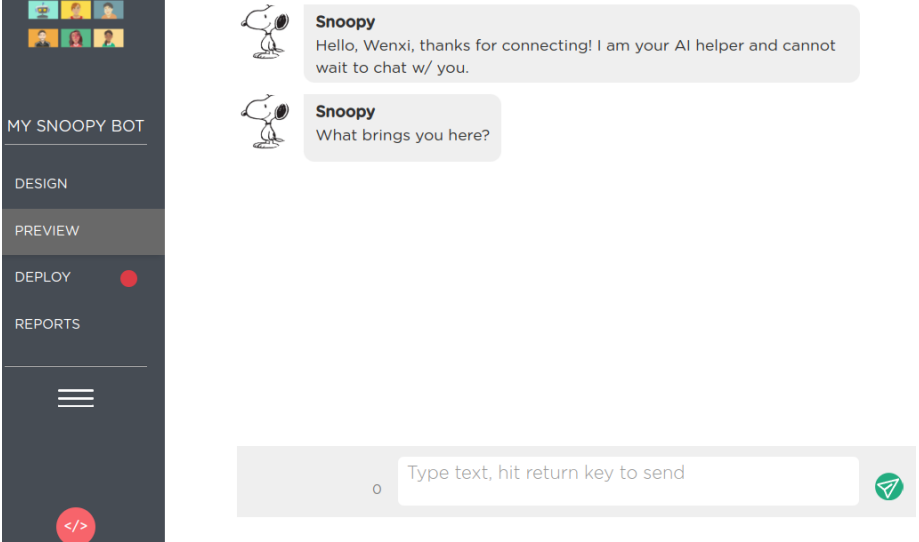
Building AI from scratch is a daunting task, as it requires AI expertise, software engineering skills, not to mention large amounts of training data or knowledge. To drastically reduce time to value and cost of ownership, pre-built AI, just like transferring one's intelligence into another's brain, offers a much quicker and better way to build AI chatbot solutions. Good pre-built AI often requires ZERO training AND produces higher quality of AI as it is built by AI experts with carefully curated or gathered training data.

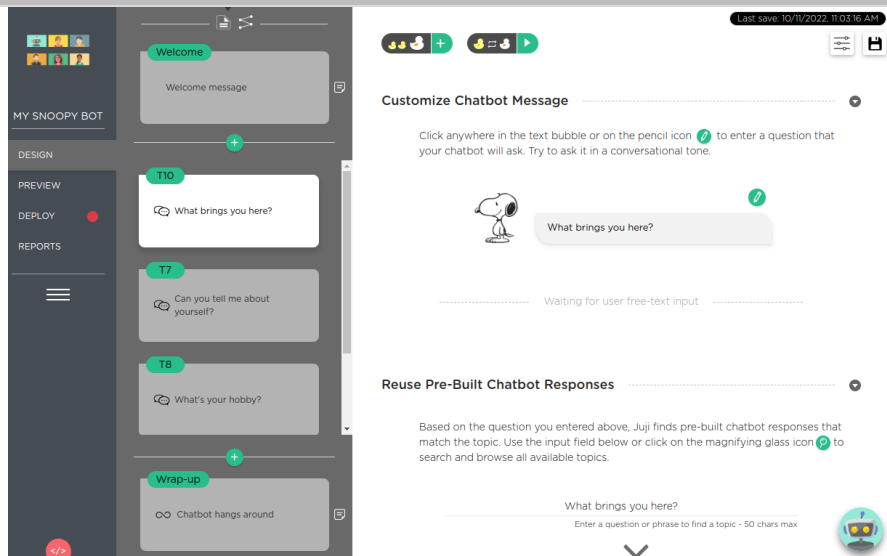
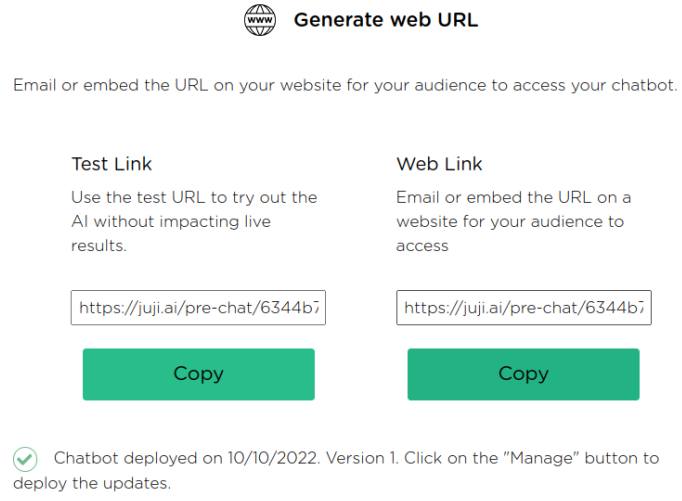
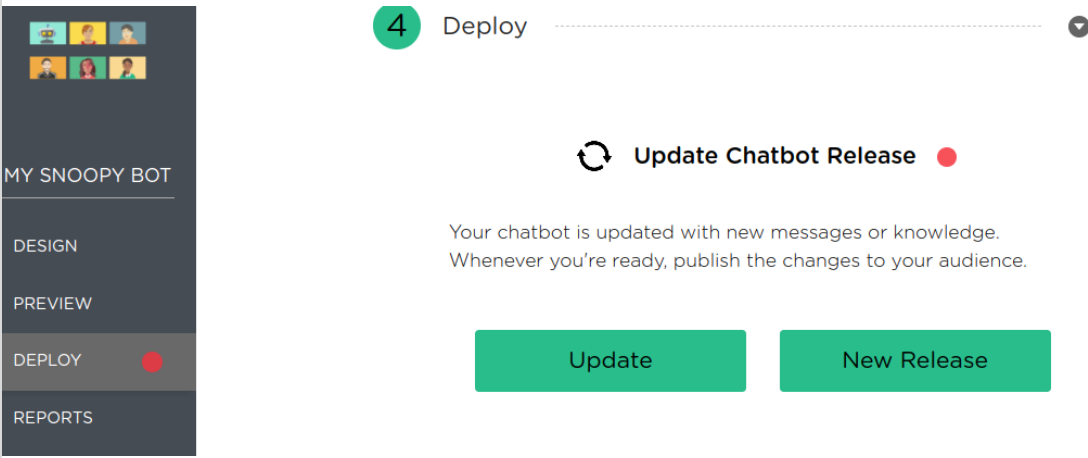
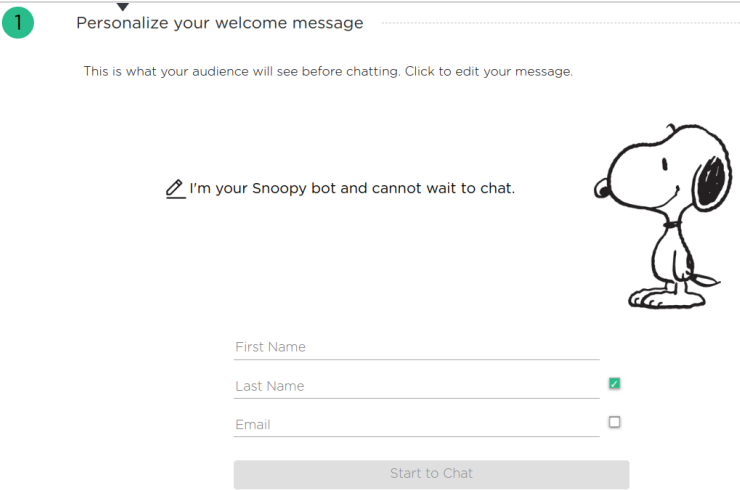
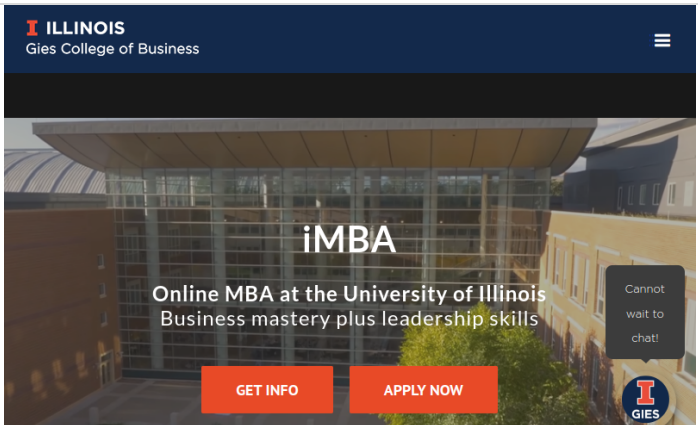
AI Chatbot Templates	<p>Evaluate whether a whole AI chatbot template can be reused to conduct conversations with ZERO training. Typically a pre-built AI chatbot template has pre-built, often domain-specific workflow (chat flow) and Q&As. It is important to check whether such an AI template supports two-way conversations as described above to deliver a satisfactory user experience and business ROI. The example shows a set of AI chatbot templates for the education domain.</p>	 <p>The screenshot shows a selection interface for AI chatbot templates. At the top, it asks "What do you intend to use your AI Helper for?" and provides a list of categories: General, HR, Education (selected), Healthcare, and All. Below this, there are seven template cards, each with an icon, a title, a brief description, and a "Create" button:</p> <ul style="list-style-type: none"> Program Assistant (General): Use this template to create an AI assistant (chatbot) to answer students' questions Program Assistant (Specific): Use this template to create an AI assistant (chatbot) to answer students' questions Teaching Assistant: Use this template to create an AI assistant (chatbot) that can help an instructor automate free-text Q&A Training Assistant: Use this template to create an AI assistant (chatbot) that can help an instructor to deliver training materials. Learning Assistant (Onboarding): Use this template to create an AI assistant (chatbot) that helps onboard a Learning Assistant (Check in): Use this template to create an AI assistant (chatbot) that can serve as a student's Learning Assistant (Assessment): Use this template to create an AI assistant (chatbot) that helps assess a student's Alum Assistant: Use this template to create an AI assistant (chatbot) to engage with your alumni or graduates. It can elicit
--------------------------------------	---	--

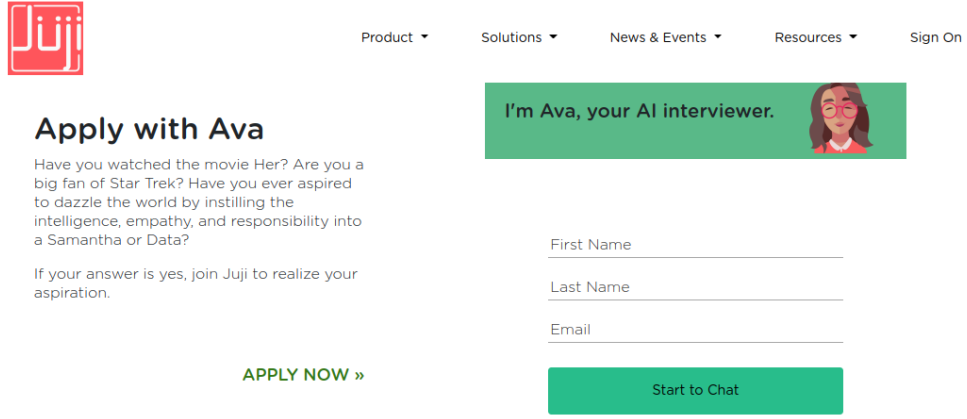
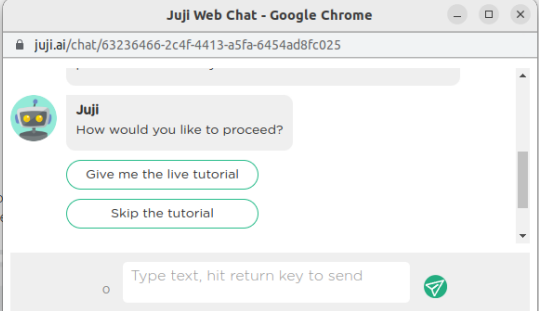
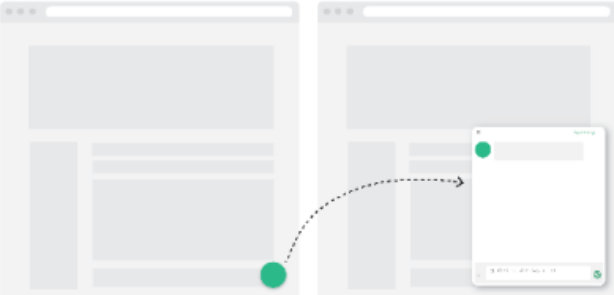

Key Capabilities	Synopsis	Examples
Multi-turn conversations by topic	Evaluate whether multi-turn conversations on a specific topic can be directly reused to engage with a user in a quality conversation automatically off the shelf with ZERO additional training. Instead of handcrafting every intent from scratch, reusing a pre-built, multi-turn conversation by topic will save an organization tremendous amounts of time. The pre-built conversation library should automatically handle diverse user responses including exceptions so chatbot owners do NOT need to train the chatbot to do so. The example on the right shows a pre-built conversation around one's self introduction off the shelf.	
Entity Extraction	Evaluate whether a chatbot can auto-extract information (e.g., entity extraction) from free-text user input off the shelf with ZERO additional training. The example on the right shows that the chatbot auto-extracts the user's name without any customization. This alleviates all the machine learning and NLP training burdens from chatbot owners.	
Sentiment Analysis	Evaluate whether a chatbot can perform sentiment analysis of a user's free-text automatically off the shelf with ZERO additional training. This feature will come handy to deliver empathetic chatbot messages.	
Question Templates	Evaluate whether and how well a chatbot can automatically learn hundreds of thousands user expressions from a couple of keywords. The example on the right shows the user inputs just a couple of keywords and the chatbot can auto-recognize diverse user expressions about the cost of the program.	
Psychographic Insights (Personality) Analytics	Evaluate whether a chatbot's psychographic inference works on any user in any conversation automatically off the shelf with ZERO additional training.	

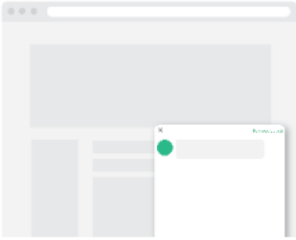
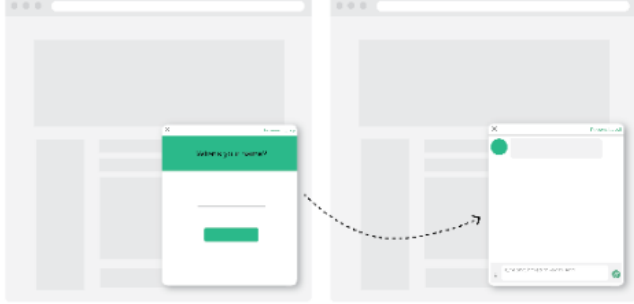
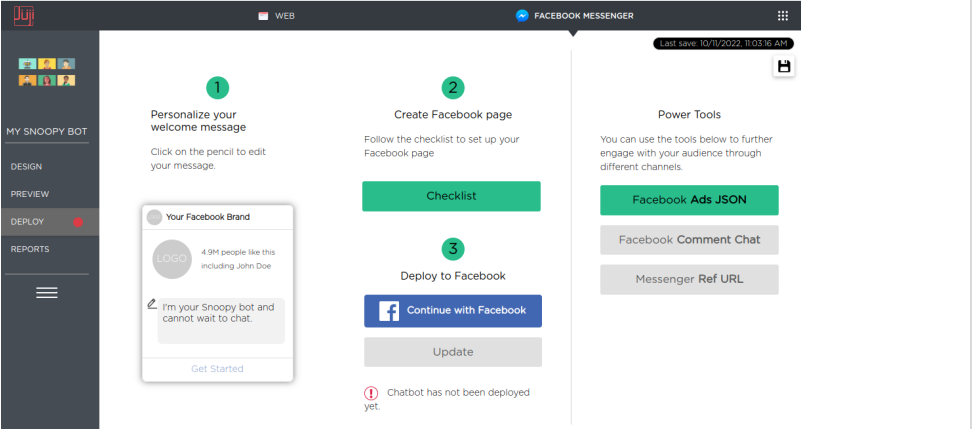
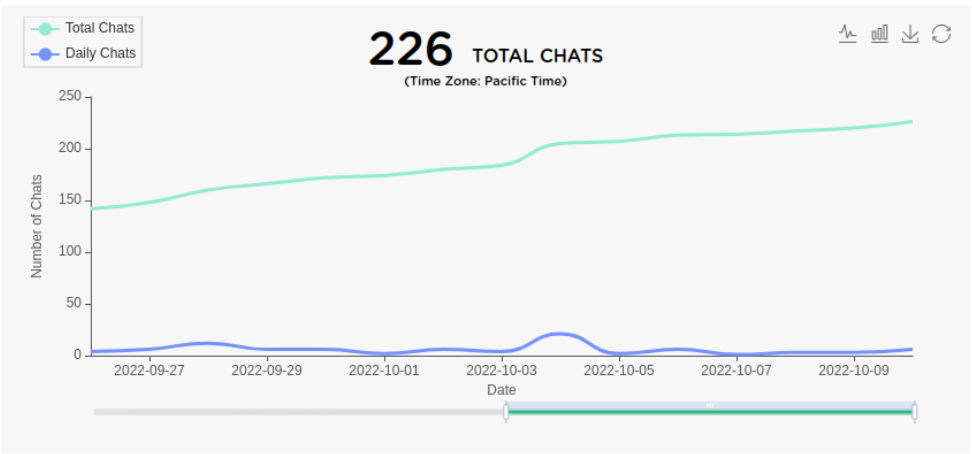

Key Capabilities	Synopsis	Examples
<p>Dialog Management</p>	<p>A conversation is often complex with multiple threads on multiple topics. Evaluate how well a chatbot manages a dialog especially how it remembers and maintains a conversation context properly. It is important to evaluate how well a chatbot can perform dialog management automatically off the shelf with ZERO additional training.</p>	
<p>2.2 Customizable AI: Chatbot Content All chatbot solutions require certain customization to adapt the chatbot behavior and messages to the brand's image and needs. One key factor to evaluate time to value and cost of ownership of a chatbot solution is to evaluate the cost of customizing a chatbot solution from both time, effort, and resource requirements (e.g., how many training data would be required and how fast can a chatbot to be trained to function). Use the following listed criteria to evaluate the flexibility of a chatbot solution in support of customization, which in turn directly impacts the overall user experience and business ROI.</p>		
<p>Customize chat flows</p>	<p>This is to customize the main work flow of a chatbot. Evaluate how easy and how flexible a chat flow can be defined and updated. Also evaluate how a chatbot supports a complex chat flow, such as nonlinear chat flows (work flows) as a conversation is hardly linear. In the example shown on the right, the chatbot helps answer student questions as well as elicits prospective student information. A good chatbot should automatically support the interleaving of these two tasks in ONE workflow regardless the number of questions a user will ask without burdening a chatbot designer to manage a chat flow manually.</p>	
<p>Customize chatbot questions</p>	<p>This is to customize a chatbot's question to a user, e.g., asking a user's program interest or interviewing a student for his/her learning experience. Evaluate how easy it is to add and edit a chatbot question and the types of question a chatbot can ask. To ensure task completion and user experience, it is also important to evaluate how the chatbot automatically handles user responses to the questions.</p>	

Key Capabilities	Synopsis	Examples
Customize chatbot responses	<p>This is to customize a chatbot's response to a user input. Evaluate how easy and fast one can customize a chatbot response under different conversation contexts. For example, how to customize a chatbot's response based on a user expressed sentiment, the semantics of a user input, or the personality of a user with ZERO training or just a couple of training examples? The example shown on the left indicates a custom user response to a user input by semantics.</p>	
Customize Q&As	<p>This is to customize a chatbot's knowledge base to answer user questions. Evaluate how easy and fast one can add custom Q&A including multi-turn Q&As and automatic support of their arbitrary nesting (e.g., starting a Q&A in the middle of another Q&A). Evaluate how many sample questions are required.</p>	
Auto-generate question paraphrases	<p>Users often ask the same questions in different expressions (e.g., how old are you and what's your age are the same question phrased differently). Evaluate whether a chatbot can auto-generate paraphrases of question expressions, which will save a chatbot designer a tremendous amount of time to come up with those alternative expressions for training.</p>	
Auto-generate response paraphrases	<p>To make a conversation more natural and engaging, a chatbot should be able to paraphrase a message without sounding robotic. Evaluate whether a chatbot can auto-generate paraphrases of a message, which will save a chatbot designer's time to come up with such paraphrases.</p>	
Chatbot fallback handling	<p>A conversation hardly follows a pre-planned path. Evaluate how a chatbot handles exceptions (fallback), which could be caused by a user's intentional or unintentional interruptions, such as asking a clarification question or giving excuses to dodge a question. Evaluate how easy and fast is it to customize the handling of fallbacks and the type of fallbacks, e.g., ignoring a user's gibberish input or disallowing a user's "I don't know" answer.</p>	

Key Capabilities	Synopsis	Examples
2.3 Customizable Chatbot Settings	To create a custom chatbot that conforms with a brand's image or gives a chatbot certain characteristics, evaluate what types of chatbot settings are possible.	
	Customize chatbot avatar	
	Customize Conversation Tempo	
	Enable and Customize Spelling Checker	
	Customize User feedback Options	
	Enable Collaborative Chatbot Design Notes	
2.4 Testing and Iterative Development	Just like any software solutions, a chatbot solution also requires testing and iterative development. Evaluate how fast one can preview and test a chatbot and how ti can be quickly and iteratively improved based on the testing.	
Instant live chatbot preview and testing	Evaluate whether one can preview or test a live chatbot during the design process.	

Key Capabilities	Synopsis	Examples
Instant chatbot design improvements	Evaluate whether one can easily switch from testing to design stage to improve a chatbot instantly based on the test	
2.5 Chatbot Deployment and Update	Evaluate how easy and quick a chatbot can be deployed and how a production chatbot can be updated.	
One-click deployment (URL)	Deployment should be made simple and quick.	
One-click update	A chatbot should be updated easily.	
Deployment customization options (website)	A chatbot might be used for different tasks and should be allowed to configured to suit different tasks. Below lists some of frequently used options.	
Embedded website deployment (avatar)	This is a typical chatbot deployment option where a chatbot shows up as an icon at a corner of a webpage.	

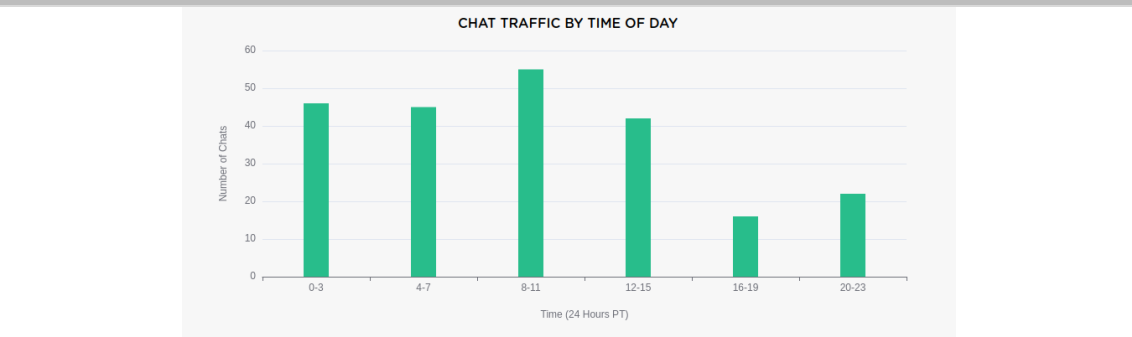
Key Capabilities	Synopsis	Examples
<p>Embedded website deployment (cover page)</p>	<p>This is to show the chat cover page on a website.</p>	
<p>Popped-out website deployment</p>	<p>This option allows a chat window to pop up so it can be moved around without obscuring the content behind the window.</p>	<p>Customize Chat Window Settings (Optional) ⌵</p> <p>When you deploy your chatbot on a webpage, you may wish to customize the chat window. Currently, you can customize its settings to enable your chatbot window to pop out or to stay open across web pages. To do so, please provide the URL of the website that you plan to deploy your chatbot to.</p> <p>Hover over the title "Web URL" to view more information.</p> <p>Web URL: <input type="text" value="https://mycompany.com"/></p> <p>Customize Chat Icon on Website</p> <p>You can customize the chat icon appearing on a web page by using a custom avatar. You must re-copy and paste the web plugin code (see below) to use a custom avatar.</p> 
<p>Customize chat start options</p>	<p>This configures how a chat will start, with or without requiring initial user information such as a first name or email.</p>	<p>Install Web plugin code (Optional)</p> <p>1. Juji allows you to configure how your chatbot starts on a website depending on your purpose, e.g., on a landing page versus on a main website. Select a desired setting for your website chatbot:</p> <p>Setting 1: This setting is the most commonly used setting for a main website with any audience. A chatbot will initially show up as an animated icon at the lower right corner of a web page. A user clicks on the icon to open a chat window and then start a chat.</p>  <p>Setting 2: This setting is recommended to be used for a main website that has a familiar target audience (e.g., job candidates) or wishes to elicit visitor information before a chat starts. Similar to Setting 1, the chatbot will initially show up as an animated icon. A visitor clicks on the icon to bring up the chat window, and then enters certain information such as his/her first name to start a chat.</p> 

Key Capabilities	Synopsis	Examples
		<p>Setting 3: This setting is recommended for a landing page use such as a page used for a Google Ads campaign or an email campaign. Once a visitor lands on the page, a chat window will automatically pop up and a chat will start immediately.</p>  <p>Setting 4: This setting is similar to Setting 3, recommended for a landing page use. Once a visitor lands on the web page, a chat window will pop up automatically. Unlike Setting 3, the visitor however must enter certain information, such as his/her first name to start a chat.</p>  <p>2. If a chat starts automatically without requiring a visitor to enter his/her first name, the default name used is Stranger. You can enter a different default name to start a chat:</p> <p>Stranger</p> <p>3. Copy the code below and insert it directly after the opening <body> tag on each page where you want the plugin to appear.</p> <p>Copy Code</p> <pre><div id='jujibot-bubble' aria-label='Chat pop-up text bubble.' alt='Chat pop-up text bubble.' tabIndex='0'></pre>
<p>Facebook Messenger deployment on FB pages</p>	<p>Deploy a chatbot on FB messenger</p>	
<p>2.6 Real-Time Reporting and Analytics</p> <p>Human-AI engagements are complex, dynamic, and often difficult to predict. To better understand how your chatbot behaves or how your audience behaves, more important whether and how well your chatbot has delivered the desired ROI, it is important to get a real-time reporting of both chatbot and user behavior as well as distilled insights from their behavior. Use the metrics below to evaluate how easy, timely, and comprehensive the aggregated chatbot and user behavior and insights distilled from their interactions are.</p>		
<p>2.6.1 Real-Time Chat Stats</p> <p>The metrics below present an overview of user information and their behavior with your chatbot. When evaluating chatbot options, evaluate whether the following information is available for real-time access.</p>		
<p>Chat traffic volume by date</p>	<p>How many chat sessions in total or by date</p>	
<p>Chat duration (average)</p>	<p>How long does a chat session last on average. A very short, e.g., less than 1 minute, may indicate a potential "bounce" and inherent issues with your chatbot</p>	<p style="text-align: center;">AVERAGE ENGAGEMENT DURATION</p> <p style="text-align: center;">5.66 min</p> 

Key Capabilities	Synopsis	Examples
------------------	----------	----------

[Chat start time](#)

When do people typically start their chat. This could you the insights on your user habits as well as when you can safely update/upgrade your chatbot if needed.



[Chat completion \(e.g., for interview chats\)](#)

How many people have completed their chat. This information is useful especially if you are using a chatbot to collect information from an audience. This tells you how many have finished answering your questions.

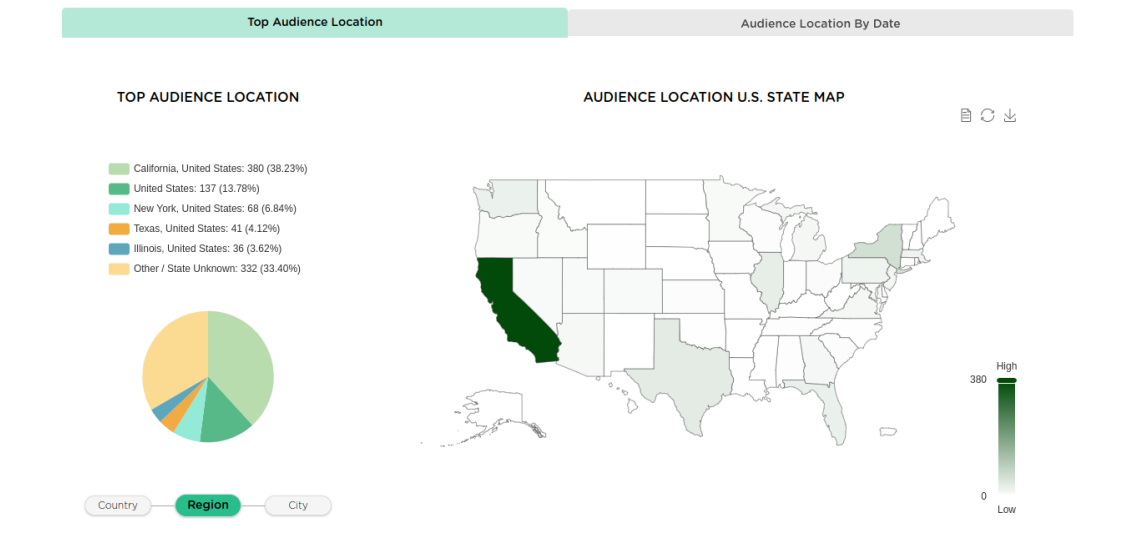
Input & "Enter" to search user Sep 1, 2022 - Sep 30, 2022 CHAT DATA

Name	Location	Completed	Start	Finish	Tell me about yourself
Mark	Sunnyvale California	Yes	2022-09-19 17:06:25	2022-09-19 17:06:47	I'm a typical introvert and would like to l
Jim	Sunnyvale California	Yes	2022-09-19 17:05:51	2022-09-19 17:06:12	I am quiet and hard working. I live by m
Matt	Sunnyvale California	Yes	2022-09-19 17:05:14	2022-09-19 17:05:37	I'm a quiet and calm person. I live by m
Michelle	Sunnyvale California	Yes	2022-09-19 17:04:35	2022-09-19 17:05:04	I am a high school graduate and curren
Emma	Sunnyvale California	Yes	2022-09-19 17:02:11	2022-09-19 17:02:42	I am an outgoing and happy person - c

Total Number of Users Retrieved: 5

[User Location](#)

Where users come from. This data can be used in conjunction of your chatbot campaigns to see where it attracts the audience.



[User Channel \(e.g., web, FB\)](#)

What channels users use to chat. This information helps you understand where your users like to engage with your chatbot.

	A	B	D	J
1	First Name	Last Name	User Agent	Channel
2	Mayed	BuAabed		facebook
3	James	Chang		facebook
4	Huahai	Yang		facebook
5	Amy	Pottorff		facebook
6	Frank	Wang		facebook
7	Barry	Hiew		facebook
8	Huahai	Yang		facebook
9	Wenxi		Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:100.0) Gecko/20100101 Firefox/100.0	web
10	Michelle		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari web	
11	Julia		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari web	
12	hh		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/101.0.4951.64 Safari web	
13	viswa		Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari/537 web	
14	Chiman		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/101.0.4951.64 Safari web	
15	Ann		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari web	
16	Mark		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_6) AppleWebKit/605.1.15 (KHTML, like Gecko) Version/15.4 Safari/605.1. web	

[User Device \(e.g., desktop, mobile\)](#)

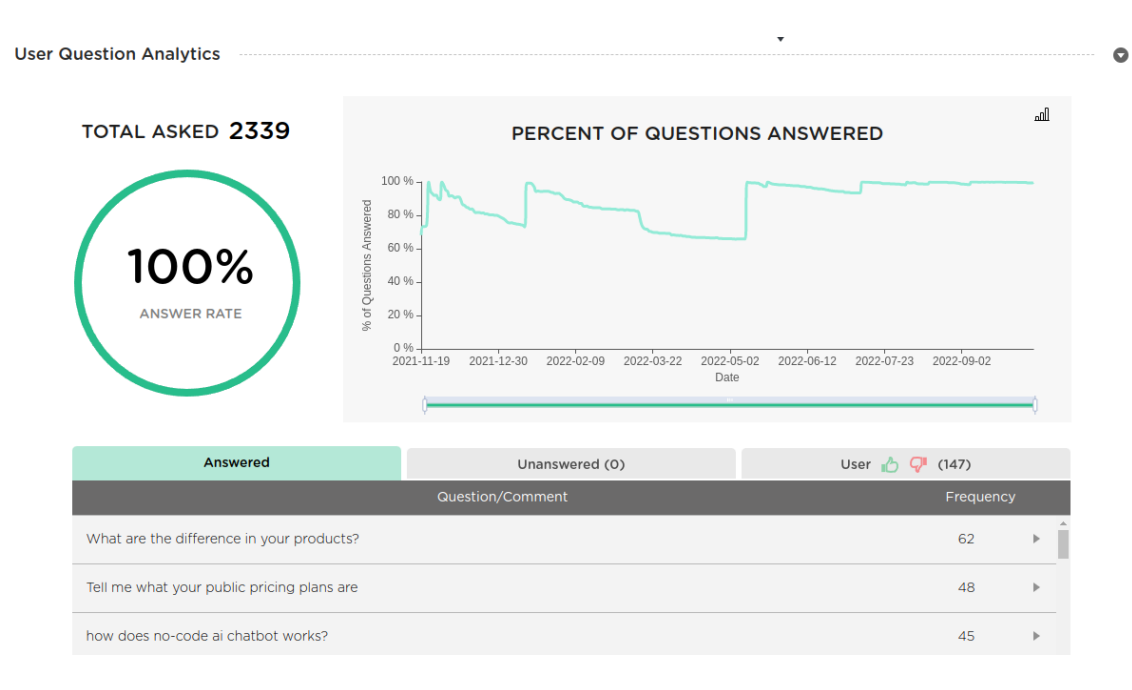
What devices users use to chat. This information helps you understand your users' usage environment so you can best customize your chatbot to support them.


	A	B	D	J
9	Wenxi		Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:100.0) Gecko/20100101 Firefox/100.0	web
10	Michelle		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari web	
11	Julia		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari web	
12	hh		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/101.0.4951.64 Safari web	
13	viswa		Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari/537 web	
14	Chiman		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/101.0.4951.64 Safari web	
15	Ann		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari web	
16	Mark		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_6) AppleWebKit/605.1.15 (KHTML, like Gecko) Version/15.4 Safari/605.1. web	

2.6.2 Real-Time User Question Analytics The following metrics are used to present a quick overview of user behavior around the questions/requests they asked/made.

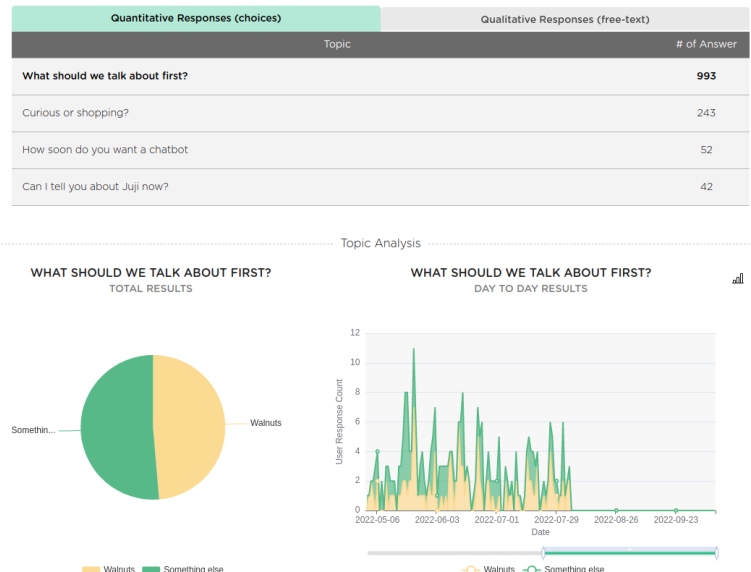
[User question analytics](#)

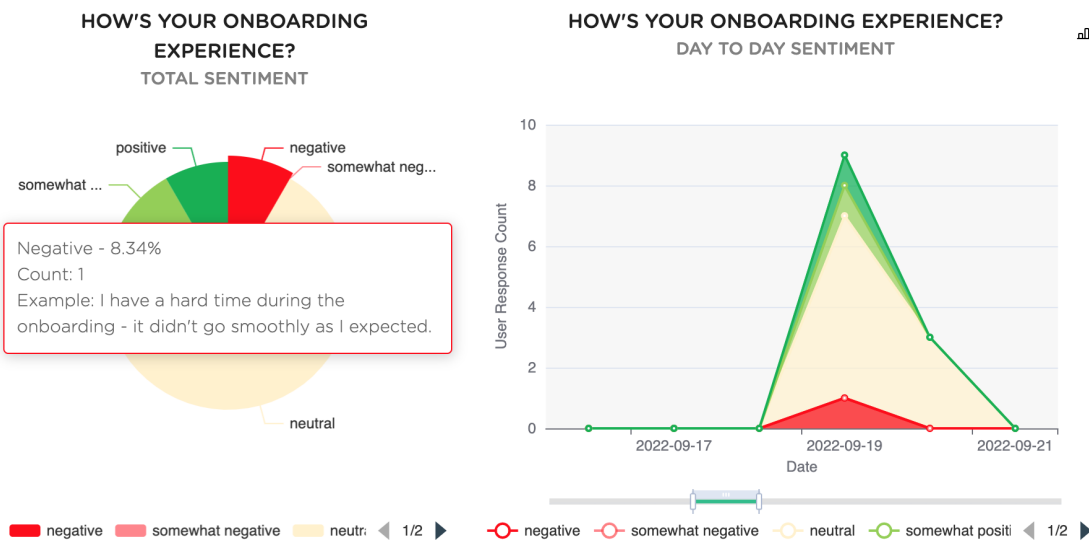
This gives an overview of user Q&A stats, such as how many questions were asked, how many were answered, and how many were not answered. These insights help you understand what your users care about the most and what's knowledge your chatbot might be missing so you can improve it.


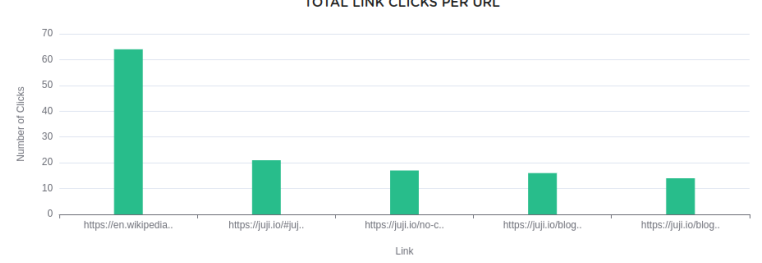


Key Capabilities	Synopsis	Examples												
User feedback analytics	<p>This gives an overview of user feedback received, including the number of total feedbacks, both positive and negative feedback or user comments. This enables you to understand your chatbot behavior as well as your user behavior, including where the chatbot has been doing well and where it fell short. It should also give a chatbot admin suggestions as how to improve a chatbot per a user's negative feedback.</p>	 <p>Help Me Fix It</p> <p>Although the user reported issues might be fixed already, they had two probable causes. If you believe the causes still exist, you can act on them.</p> <p>The user question "what is the life of a chat bot?" does not exist in the system Knowledge Base (KB). So Juji answered the question by matching it with a similar question in the KB.</p> <table border="1" data-bbox="923 668 1733 947"> <thead> <tr> <th>Similar Question and Paraphrases Found in KB</th> <th>Answers</th> </tr> </thead> <tbody> <tr> <td>tell me about chat bot</td> <td>chatbot = chat + bot or AI chat, it means a machine like me that can chat :-)</td> </tr> <tr> <td>AI chatbot</td> <td></td> </tr> <tr> <td>What means ia chatbot</td> <td></td> </tr> <tr> <td>chat box</td> <td></td> </tr> <tr> <td>What's AI chat bot</td> <td></td> </tr> </tbody> </table> <p>Probable Cause 1 Due to machine learning error, Juji might have made the wrong match. If you believe the user question should not match the question(s) in the KB as shown above, you can fix it by (a) adding the user question as a new entry and then (b) entering the correct answer.</p> <p>Act Now</p> <p>Probable Cause 2 Although the question match is correct, due to human error, one or more answers of the</p>	Similar Question and Paraphrases Found in KB	Answers	tell me about chat bot	chatbot = chat + bot or AI chat, it means a machine like me that can chat :-)	AI chatbot		What means ia chatbot		chat box		What's AI chat bot	
Similar Question and Paraphrases Found in KB	Answers													
tell me about chat bot	chatbot = chat + bot or AI chat, it means a machine like me that can chat :-)													
AI chatbot														
What means ia chatbot														
chat box														
What's AI chat bot														

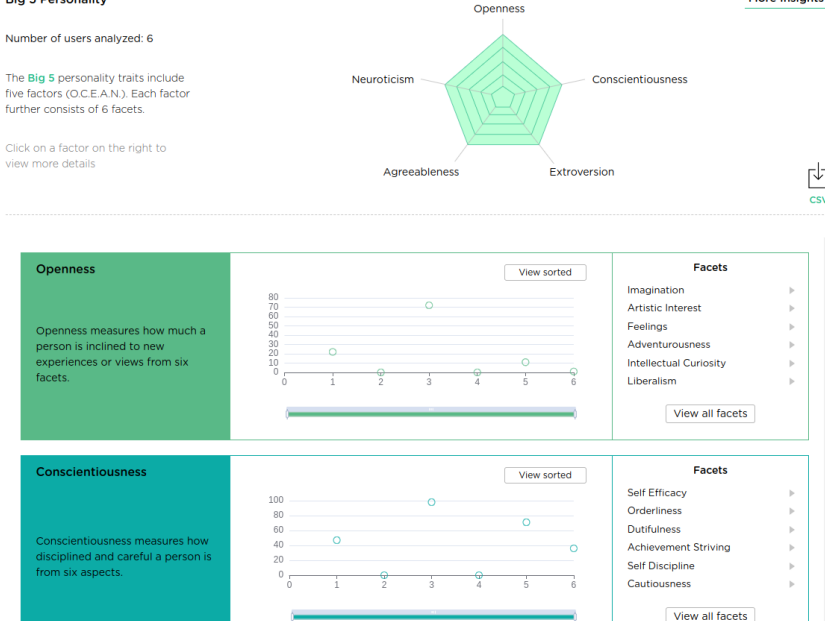
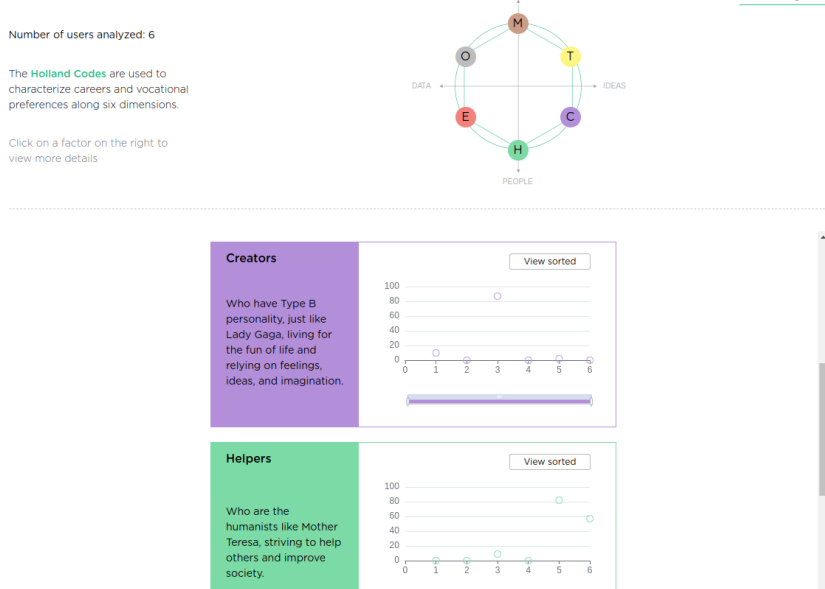
2.6.3 Real-Time User Response Analytics The metrics below summarize user responses to chatbot questions.

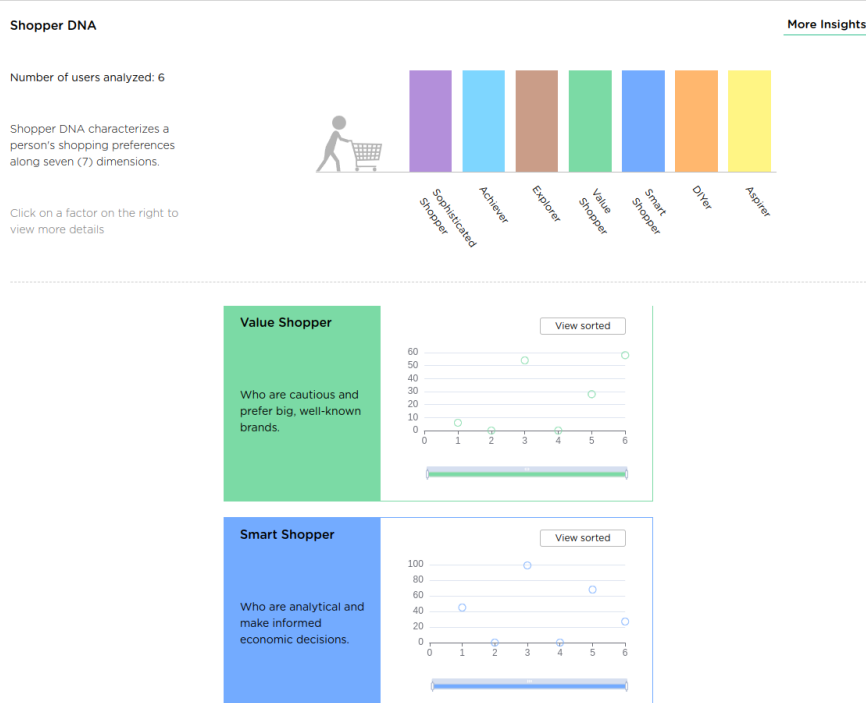
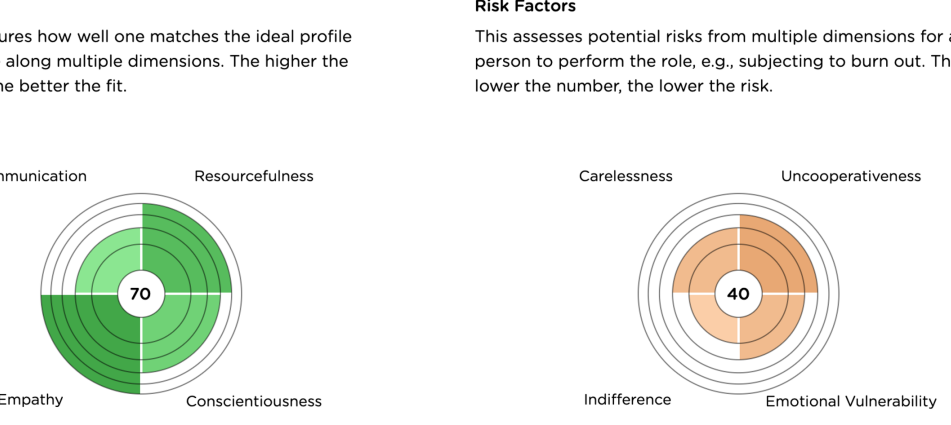
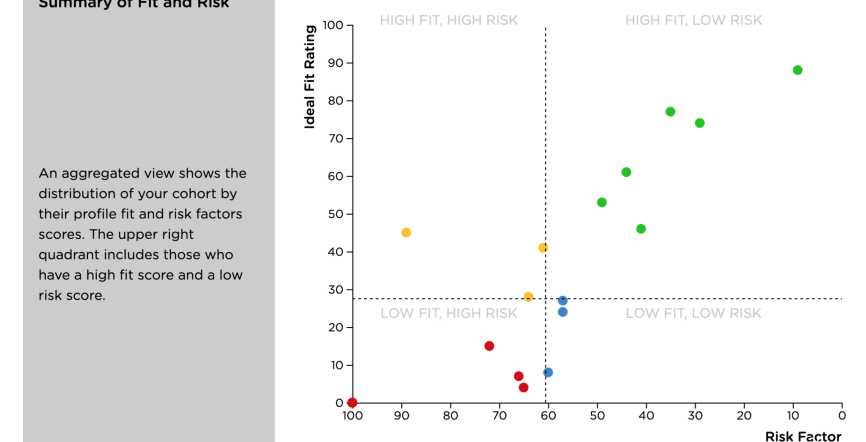
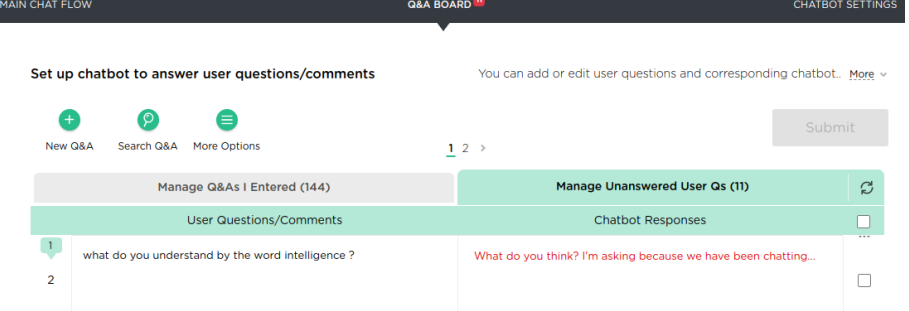
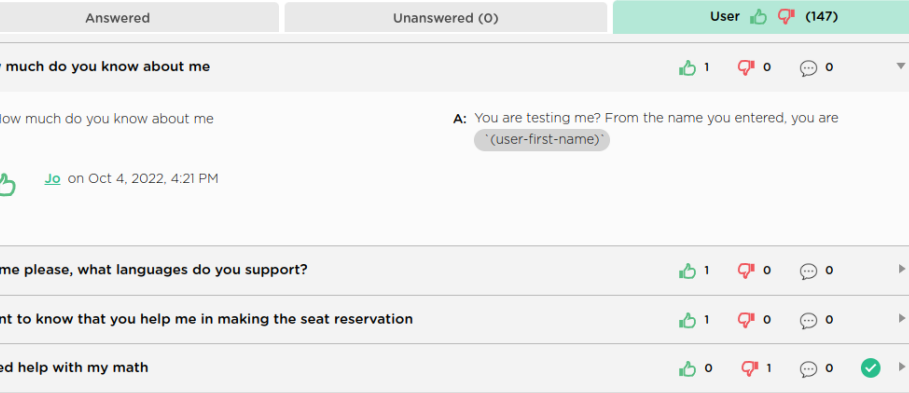
<p>Quantitative user response analytics (multiple visual analytics charts)</p>	<p>A visual analytic summary of user responses to quantitative questions (choice questions) as well as a visual summary of temporal trend of user responses to quantitative questions.</p>	 <table border="1" data-bbox="977 1445 1673 1631"> <thead> <tr> <th>Topic</th> <th># of Answer</th> </tr> </thead> <tbody> <tr> <td>What should we talk about first?</td> <td>993</td> </tr> <tr> <td>Curious or shopping?</td> <td>243</td> </tr> <tr> <td>How soon do you want a chatbot</td> <td>52</td> </tr> <tr> <td>Can I tell you about Juji now?</td> <td>42</td> </tr> </tbody> </table>	Topic	# of Answer	What should we talk about first?	993	Curious or shopping?	243	How soon do you want a chatbot	52	Can I tell you about Juji now?	42
Topic	# of Answer											
What should we talk about first?	993											
Curious or shopping?	243											
How soon do you want a chatbot	52											
Can I tell you about Juji now?	42											

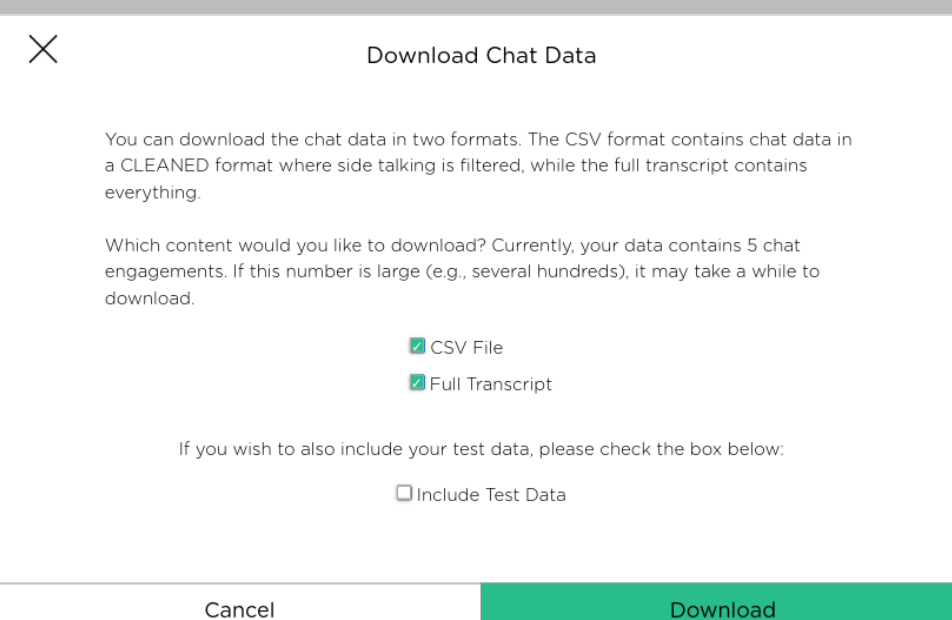
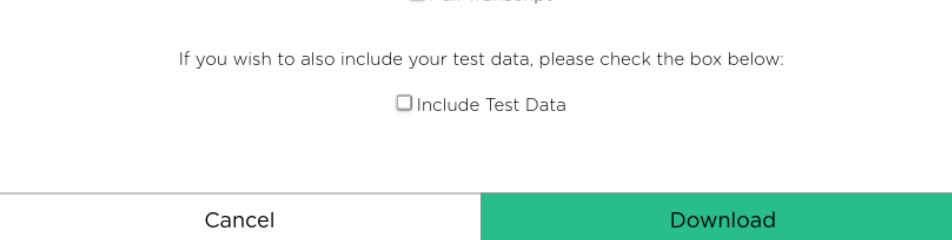
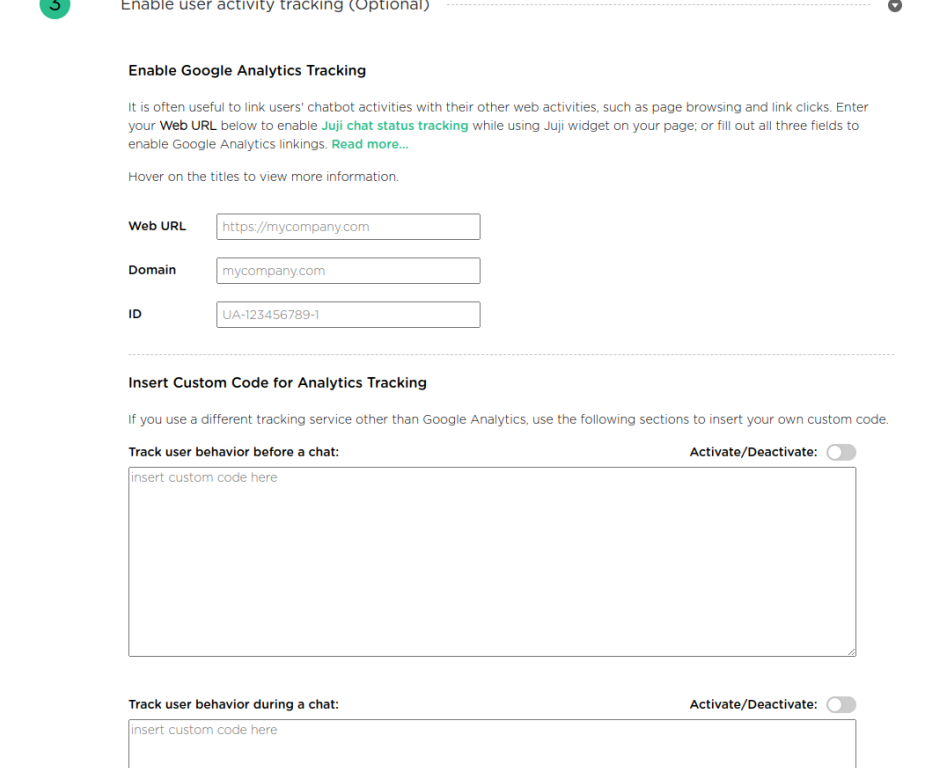
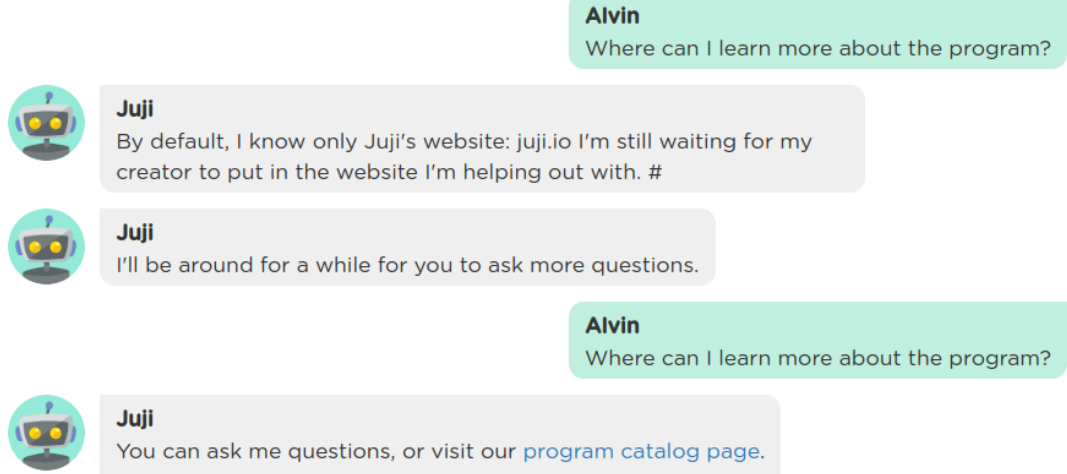
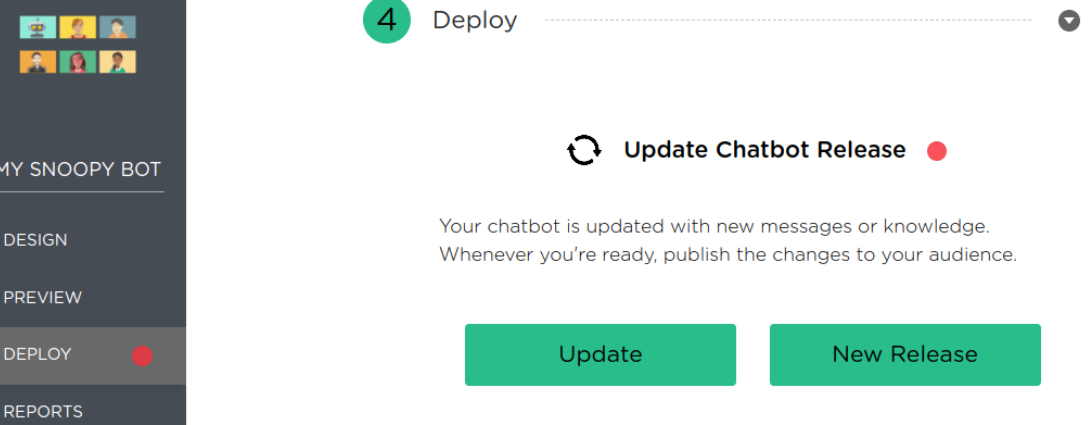
<p>Free-text user response analytics by sentiment</p>	<p>A visual analytic summary of sentiment analysis of user free-text responses to open-ended questions and the temporal sentiment trend. The example on the right shows how it analyzed the expressed sentiment of users' free-text responses to the question "How's your onboarding experience".</p>	
---	---	--

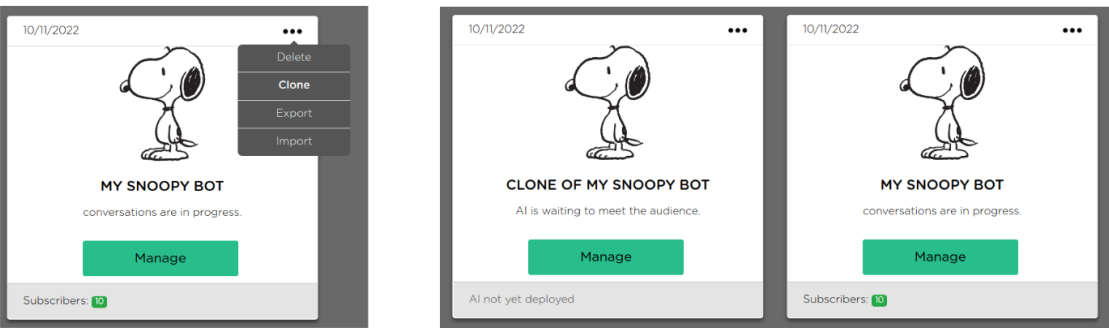
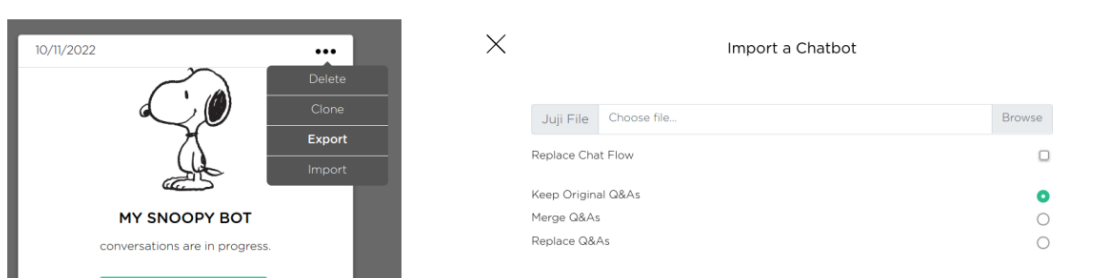
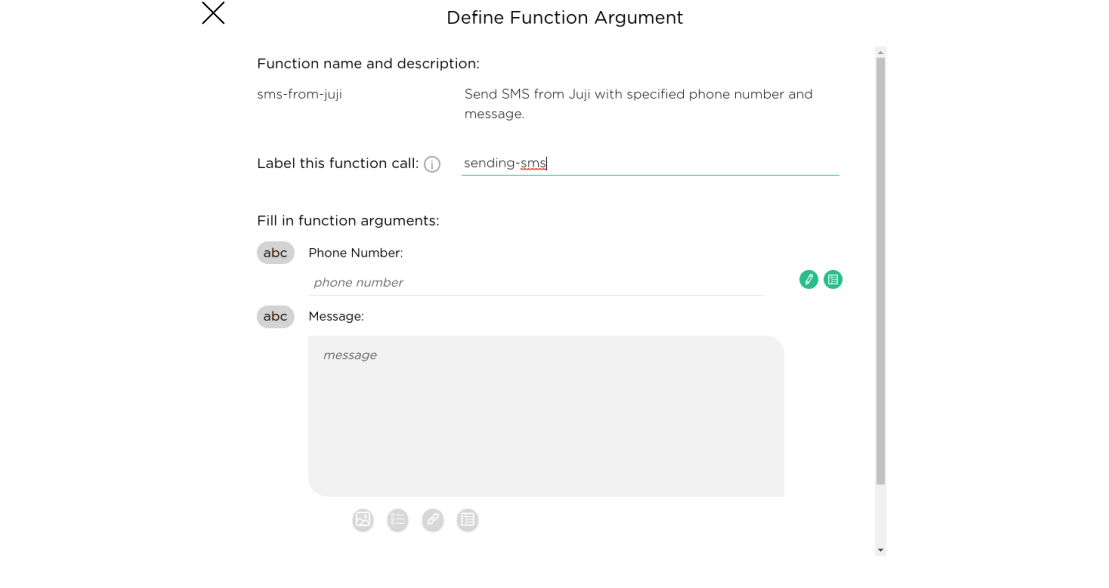
Key Capabilities	Synopsis	Examples								
Free-text user response analytics by keywords	A visual analytic summary of user free-text responses to open-ended questions by keywords in a word cloud.	<p>Word Cloud</p> <p>COULD YOU INTRODUCE YOURSELF? WORD CLOUD</p> 								
Free-text user response analytics by topic	A visual analytic summary of user free-text responses to open-ended questions by topic. This will help a chatbot admin figure out the key topics expressed or cared by users during the chat.									
Link click-through analytics	A visual analytic summary of user link click-throughs. This information helps a chatbot admin understand what information is important or useful for users.	<p>User Click-throughs</p> <p>TOTAL LINK CLICKS PER URL</p>  <table border="1" data-bbox="1008 1336 1632 1491"> <thead> <tr> <th>Link</th> <th>Clicks</th> </tr> </thead> <tbody> <tr> <td>https://en.wikipedia.org/wiki/Walnut</td> <td>64</td> </tr> <tr> <td>https://juji.io/#juji-smarts</td> <td>21</td> </tr> <tr> <td>https://juji.io/no-code-ai-chatbot-builder/</td> <td>17</td> </tr> </tbody> </table>	Link	Clicks	https://en.wikipedia.org/wiki/Walnut	64	https://juji.io/#juji-smarts	21	https://juji.io/no-code-ai-chatbot-builder/	17
Link	Clicks									
https://en.wikipedia.org/wiki/Walnut	64									
https://juji.io/#juji-smarts	21									
https://juji.io/no-code-ai-chatbot-builder/	17									

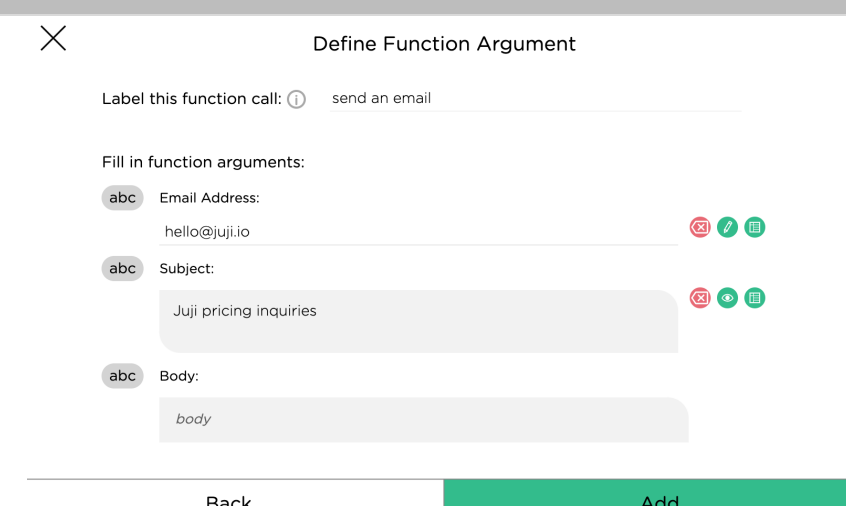
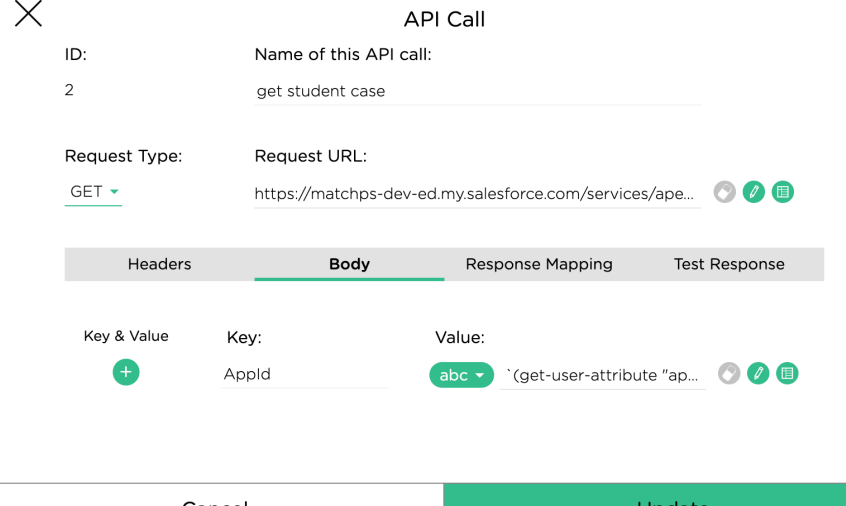
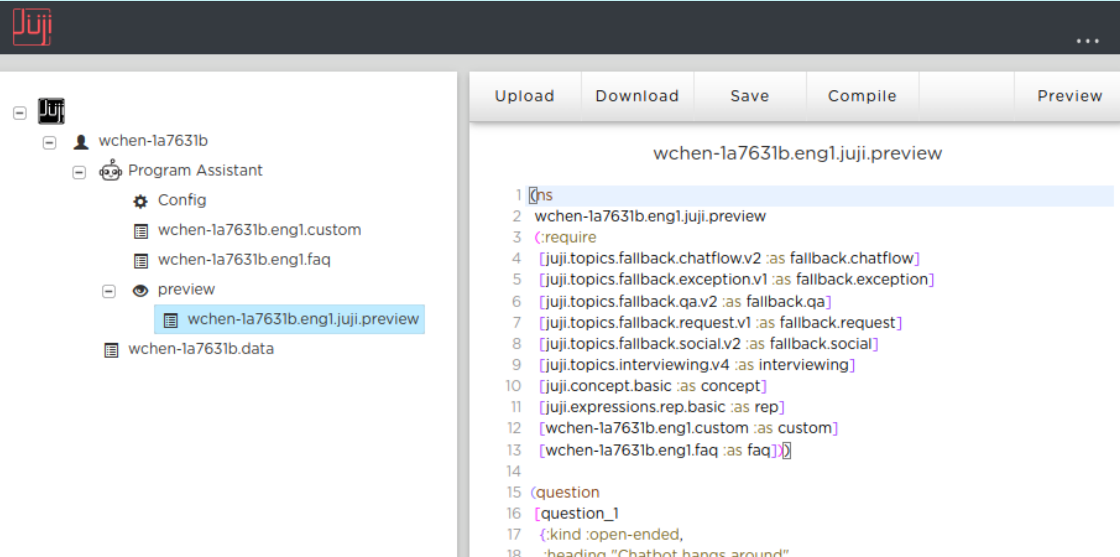
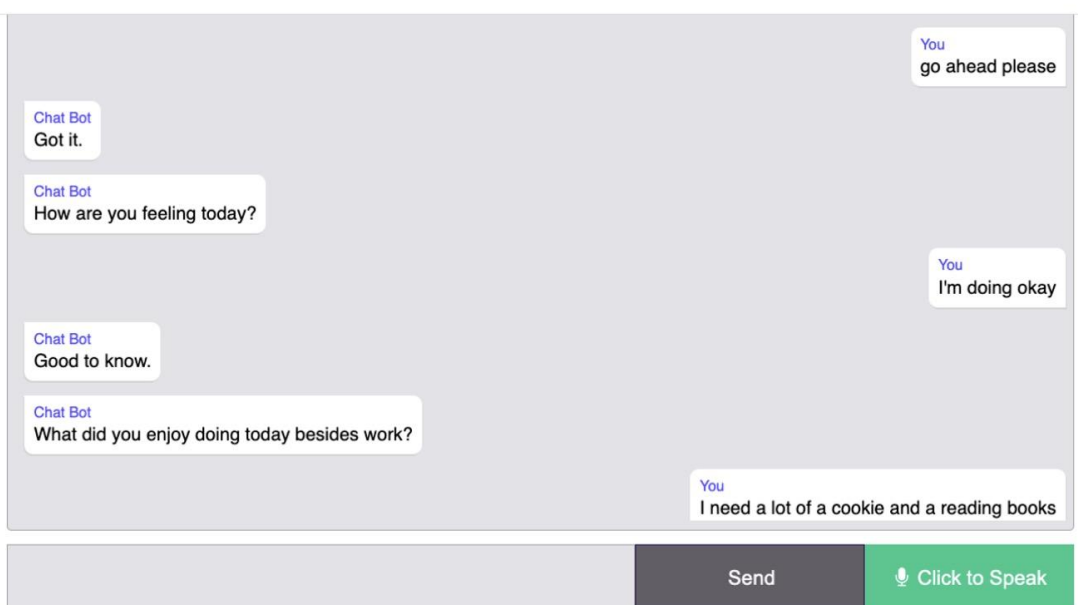
2.6.4 Real-Time Psychographic Analytics Visual displays of inferred psychographic insights that can aid human decision making as well as humans deliver hyper-personalized advices based on each user's individual characteristics, such as their interests, needs, and personality.

Pre-Built Big 5 Personality Visual Analytics	A visual summary of a cohort's 35 Big 5 personality trait score distribution and an individual's 35 Big 5 scores.	<p>Big 5 Personality</p> <p>Number of users analyzed: 6</p> <p>The Big 5 personality traits include five factors (O.C.E.A.N.). Each factor further consists of 6 facets.</p> <p>Click on a factor on the right to view more details</p> 
Pre-Built Holland Codes Visual Analytics	A visual summary of a cohort's 6 Holland Code score distribution and an individual's 6 Holland Code scores	<p>Holland Codes</p> <p>Number of users analyzed: 6</p> <p>The Holland Codes are used to characterize careers and vocational preferences along six dimensions.</p> <p>Click on a factor on the right to view more details</p> 

Key Capabilities	Synopsis	Examples
Pre-Built Shopper DNA Visual Analytics	A visual summary of a cohort's 7 Shopper DNA score distribution and an individual's 7 Shopper DNA scores	 <p>Shopper DNA</p> <p>Number of users analyzed: 6</p> <p>Shopper DNA characterizes a person's shopping preferences along seven (7) dimensions.</p> <p>Click on a factor on the right to view more details</p> <p>Value Shopper Who are cautious and prefer big, well-known brands.</p> <p>Smart Shopper Who are analytical and make informed economic decisions.</p>
Fit-Risk or Strength-Weakness custom profiles	A visual summary of a custom Fit-Risk or Strength-Weakness contrast profile based on the inferred psychographic insights for a given context, such as a student's fit for completing an online degree and potential risks of quitting.	 <p>Ideal Fit This measures how well one matches the ideal profile of the role along multiple dimensions. The higher the number, the better the fit.</p> <p>Risk Factors This assesses potential risks from multiple dimensions for a person to perform the role, e.g.,, subjected to burn out. The lower the number, the lower the risk.</p>
Individuality Quadrant	An individuality Quadrant displays the distribution of a cohort's fit-risk or strength-weakness scores for a quick overview and the plan for the next best actions. For example, human advisors could use the insights to identify who are at risk of abandoning their study and help retain them to complete their online degree programs)	 <p>Summary of Fit and Risk</p> <p>An aggregated view shows the distribution of your cohort by their profile fit and risk factors scores. The upper right quadrant includes those who have a high fit score and a low risk score.</p>
2.7 Real-Time Chatbot Monitoring and Maintenance Adopting a chatbot solution requires periodical chatbot monitoring and maintenance, such as identifying the chatbot's deficiencies and upgrading the chatbot's knowledge base. How easy one can monitor a chatbot and how fast one can update a chatbot directly impact a chatbot solution's cost of ownership.		
2.7.1 Real-Time Chatbot Monitoring Evaluate whether one can be notified of a chatbot behavior in real time with the following critical information.		
Notification of unanswered user questions with answer recommendations	This is to notify a chatbot admin of unanswered user questions and the suggestion of possible answers to those questions. This notification inform a chatbot admin of chatbot failures.	
Notification of user chat feedback with fix/enhancement recommendations	This is to notify a chatbot admin of received user feedback and possible solutions to address user negative feedback.	

Key Capabilities	Synopsis	Examples
<p>Access to full chat transcripts</p>	<p>This is to provide a chatbot admin the knowledge of all chats.</p>	
<p>Access to distilled chat information in downloadable CSV</p>	<p>This is to provide a chatbot admin the "cleaned" user responses for further analyses (e.g., user research)</p>	
<p>Pre-built integration of external tracking software (Google Analytics, Adobe Analytics, FullStory and any tracking tool with JS scripts)</p>	<p>This is to allow a chatbot admin to track user behavior in correlation to their chat behavior, e.g., the percentage of users who chatted also applied for a program.</p>	
<p>2.7.2 Real-Time Chatbot Maintenance Once a chatbot failure is detected, it is important to fix the failure ASAP to gain user trust. Evaluate how fast and easy one can fix a chatbot's failure.</p>		
<p>Instant FAQ live update to uninterruptable critical conversations</p>	<p>Evaluate whether one can update a chatbot's Q&A capabilities without interrupting any ongoing conversations. This is an important measure because an update will enable the chatbot to answer more critical user questions however it should NOT interrupt any other ongoing conversations.</p>	
<p>One-click, instant update of production deployment</p>	<p>Evaluate how fast and easy one can update a production chatbot. A chatbot may be updated frequently to fix bugs as well as improve its own intelligence or knowledge. Evaluate how easy and fast is to update a chatbot in production. Preferably in one click.</p>	

Key Capabilities	Synopsis	Examples
Multi-channel, automated answer notifications to users (via SMS and Email)	If a chatbot failure cannot be patched up instantly (e.g., no humans around to help), evaluate what back channels are supported to notify users, e.g., SMS or email, once the answers or solutions are become available. This provides additional channels to engage with users off chat.	<p>Ask users to opt-in for an email notification when an answer to their question becomes available <input checked="" type="checkbox"/></p> <p>Customize Email Content</p> <p>Subject: Our answer to your question "(user-question)" x "</p> <p>CC: Input emails to cc here (separate each email with a comma)</p> <p>BCC: wchen@juji-inc.com</p> <p>Body: Hello "(user-first-name)" x ,</p> <p>Thank you for chatting with "(our-ai-assistant)" x ! I'm happy to notify you that our AI assistant is now able to answer one of your unanswered questions. For your convenience, I include both your question and the answer below for your information.</p> <p>"(user-question)" x</p> <p>"(user-question-answer)" x</p> <p>Thank you,</p>
III. Enterprise-Scale Adaptability & Extensibility to Maximize Solution ROI	<p>When an organization adopts a chatbot solution, it is often the case that the organization wishes to connect the chatbot with existing systems (e.g., CRM, CMS, and live chat) or build upon the current solution to support new users of the chatbot in the future. Thus it is important to evaluate whether such a solution can be easily and quickly integrated with third-party systems and can be adapted and extended to support new tasks or multiple tasks. For example, when an educational institute starts with a chatbot solution to support student recruitment, it may want to integrate the chatbot with their underlying CRM system so their advisors can follow up with the prospects. Moreover, they may wish to connect the chatbot with their application system and extend it to help prospective students during their application process to improve application success. Likewise, the educational institute may want to add additional chatbots and connect them to registration systems or financial systems to help student retention or alumni engagement. To evaluate whether a chatbot option is easily adaptable or extensible, it would be good to assess the following aspects.</p> <p>The criteria listed below focus on evaluating how efficiently and effectively an IT team (who are the architects and bridge builders) can work together with Subject Matter Experts (who are the content or knowledge providers) to create useful and usable chatbot solutions that are also extensible.</p>	
3.1 Adaptability of Chatbot Solution	Evaluate how quickly and easily a chatbot can be adapted to a new task or support multiple tasks. The following factors help assess such capabilities.	
Clone a chatbot	This allows rapid reuses of the entire conversation content and logic of an existing chatbot within the same chatbot designer account and adapt it to new tasks.	 <p>The image shows three mobile app screens for 'MY SNOOPY BOT'. The first screen shows a menu with 'Clone', 'Export', and 'Import' options. The second screen shows 'CLONE OF MY SNOOPY BOT' with 'AI not yet deployed'. The third screen shows 'MY SNOOPY BOT' with 'conversations are in progress'.</p>
Export and import a whole or partial runnable chatbot	This allows rapid reuse of the entire or partial conversation content and logic of an existing chatbot across chatbot designers' accounts and adapt it to new tasks.	 <p>The image shows a mobile app screen for 'MY SNOOPY BOT' with a menu containing 'Export' and 'Import'. To the right is a 'Import a Chatbot' dialog box with options: 'Replace Chat Flow' (unchecked), 'Keep Original Q&As' (checked), 'Merge Q&As' (unchecked), and 'Replace Q&As' (unchecked). 'Cancel' and 'Merge' buttons are at the bottom.</p>
Export and import FAQs including multi-turn, complex FAQs	This allows rapid reuse of trained Q&A for any chatbots within and across chatbot designers' accounts.	
3.2 Extensibility of Chatbot Solution	In many solutions, a chatbot may need to be integrated with external communication channels (e.g., SMS and Email) or data resources (e.g., CMS, CRM, or human agents), being white labeled and embedded in a particular application/solution, or being powered with external capabilities (e.g., multilingual or speech). Evaluate how quick and easy it is to connect a chatbot to external resources or integrated with additional external capabilities. The following factors help evaluate the extensibility of a chatbot option.	
Connect to off-chat channel: sending SMS in chat	Allows a chatbot to send a SMS to a user for additional connection. The example on the right shows how to enable a chatbot to send an SMS to a user.	 <p>The image shows a 'Define Function Argument' dialog box. It includes fields for 'Function name and description' (sms-from-juji, Send SMS from Juji with specified phone number and message), 'Label this function call' (sending-sms), and 'Fill in function arguments' (Phone Number: phone number, Message: message). 'Back' and 'Add' buttons are at the bottom.</p>

Key Capabilities	Synopsis	Examples
Connect to off-chat channel: sending emails in chat	Allows a chatbot to send an email to a user for additional connection. The example on the right shows how to enable a chatbot to send an email, e.g., alerting the Juji team of user pricing request/inquiries.	
Hand-off to human agents with Genesys live chat (upcoming this month)	Allows a chatbot to hand off a conversation to a human agent	
Call external CMS or CRM APIs to record or retrieve information during conversation	Allow a chatbot to be integrated with a third-party CMS or CRM to store user information as well as retrieve info from such systems. The example on the right shows an API call to a Salesforce student database to retrieve a student's application status per the student's inquiry "What's my application status". In this call, the chatbot receives the student's applicant ID and then calls the Salesforce API to retrieve the requested information.	
3.2.1 Juji IDE: deep chatbot customization via scripting	Allow a chatbot developer to write scripts to create his/her own reusable, custom conversational AI resources (e.g., conversation library) and use of external and custom functions.	
Customize conversation topics	An organization may have IT resources and wish to write task-specific conversation topics, e.g., recognizing special data entities and intents as well as perform specific functions (e.g., transactions). In this case, developers should be allowed to write their custom conversation topics or use third-party NLU and NLG modules. These custom conversation topics can also be packaged into custom library to be reused for all the brand's chatbots.	
Define Custom Functions	An organization may need to support custom chatbot actions such as financial transactions or database inquiries. Developers should be able to define those custom functions and use them in a chatbot.	
Customize Dialog Management	An organization may need to support custom dialog management policies (e.g., prioritizing certain types tasks or Q&A). In this case, one should be able to define their chat flow management policies (e.g., indicating which topics are more important than others or even which topics are optional)	
3.2.2 Juji API: third-party white-labeling of chatbots with zero-code installation	Allow a developer to incorporate a chatbot into third-party app (e.g., mobile app) or power a chatbot with external communication resources (e.g., speech + language translation). The example on the right shows a white-labeled chat interface that is also speech enabled.	
Embed a no-code chatbot in a third-party app	Organizations may wish to deploy a chatbot in a mobile app, behind a firewall, or be part of an existing application (web or standalone). IT team should be able to use API to embed a made chatbot directly into a third-party app without worrying about its behavior or training it. The team should be able to control its look and feel, as well as its interactions with other systems. For example, when using Juji API to deploy a chatbot behind a firewall, one could add user authentication before the chat starts.	

Key Capabilities	Synopsis	Examples
Empower a chatbot with more powers	<p>Organizations may also wish to add speech capabilities or multilingual capabilities to a chatbot. Use these external API in conjunction with chatbot API, it can be easily done. This enables the IT developers to take full advantage of built-in AI like what Juji provides while augmenting the power of such AI. Again, this criteria will save an IT team tremendous amounts of time of tweaking a chatbot's internal AI. Instead, they can spend their precious time on augmenting the chatbot.</p>	
Augment Third-Party AI or Chatbot	<p>Organizations may have built their chatbots using self-created or third-party tools. However they may not be happy about the certain parts of the AI but don't want to give up them completely. In this case, you can use Juji API to augment your existing chatbots by literally "slipping an existing chat flow" into Juji. Again, this is to improve IT efficiency by connecting AI powers from multiple sources.</p>	