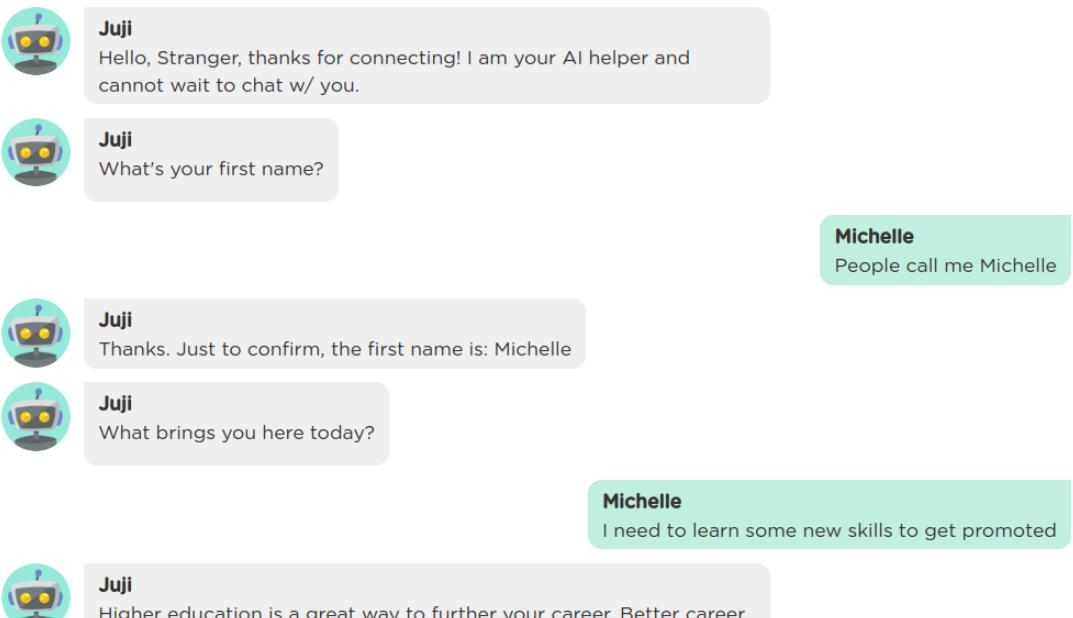
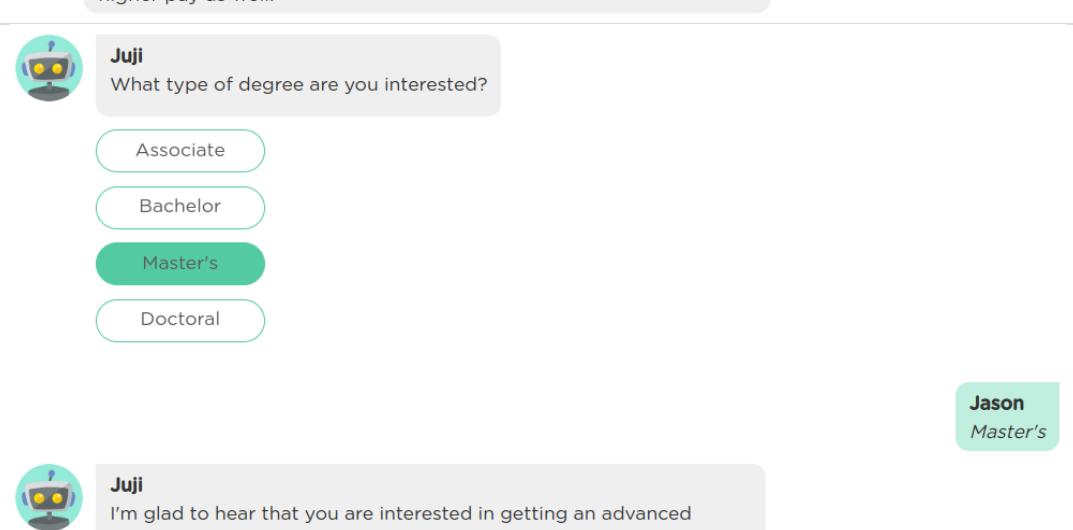
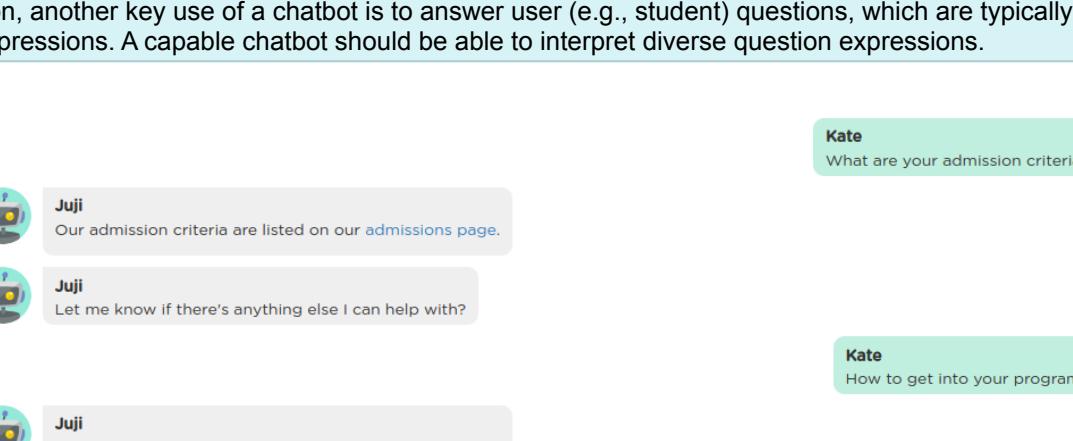
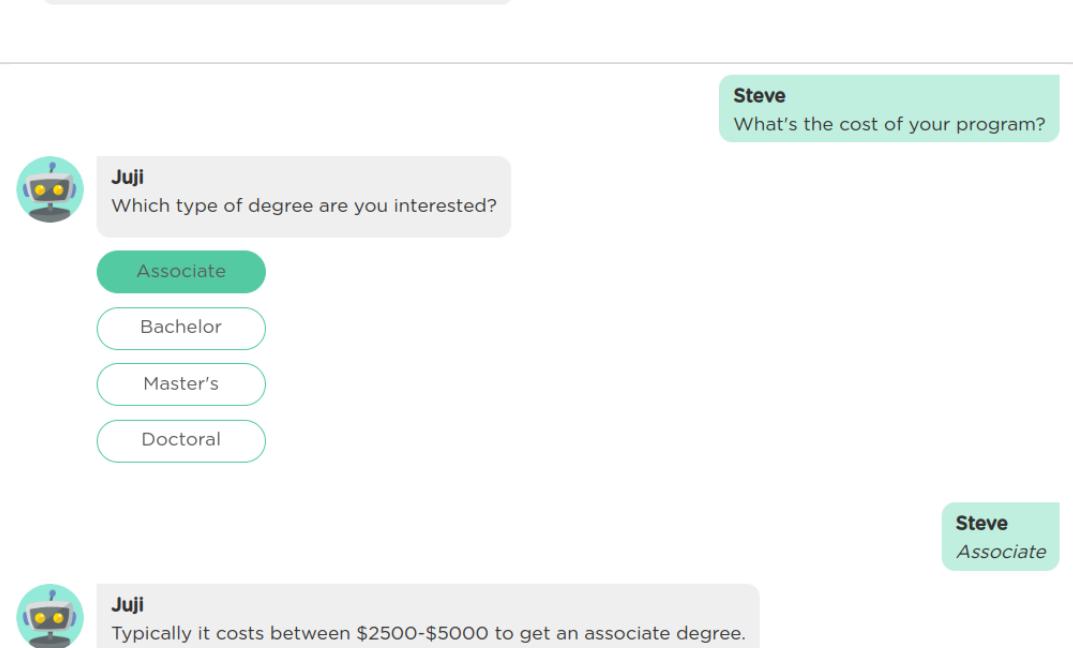
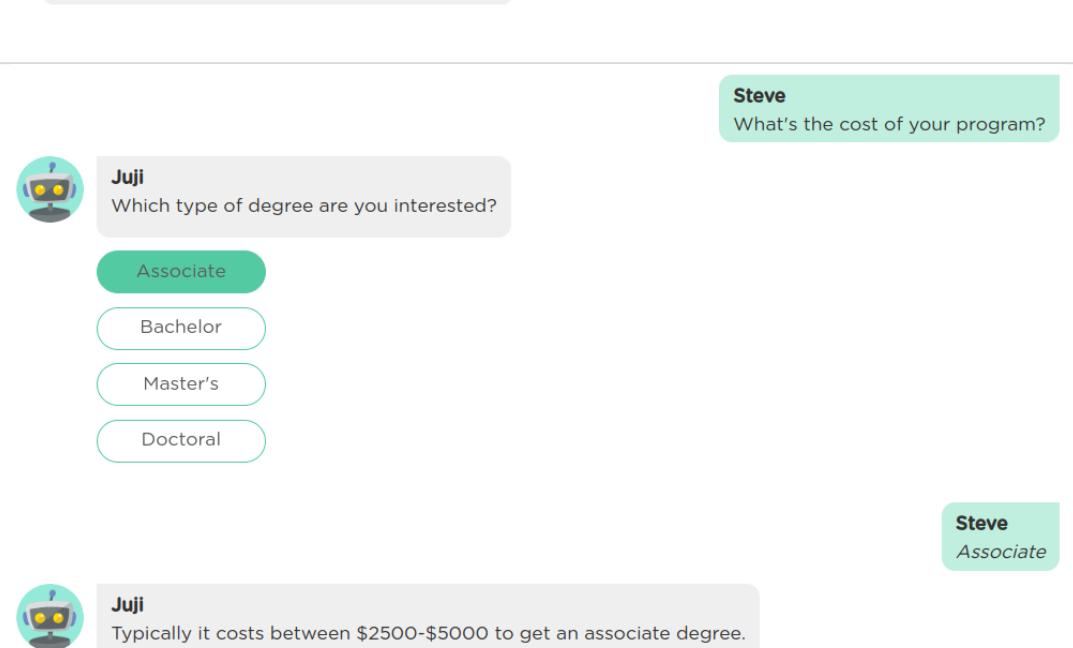
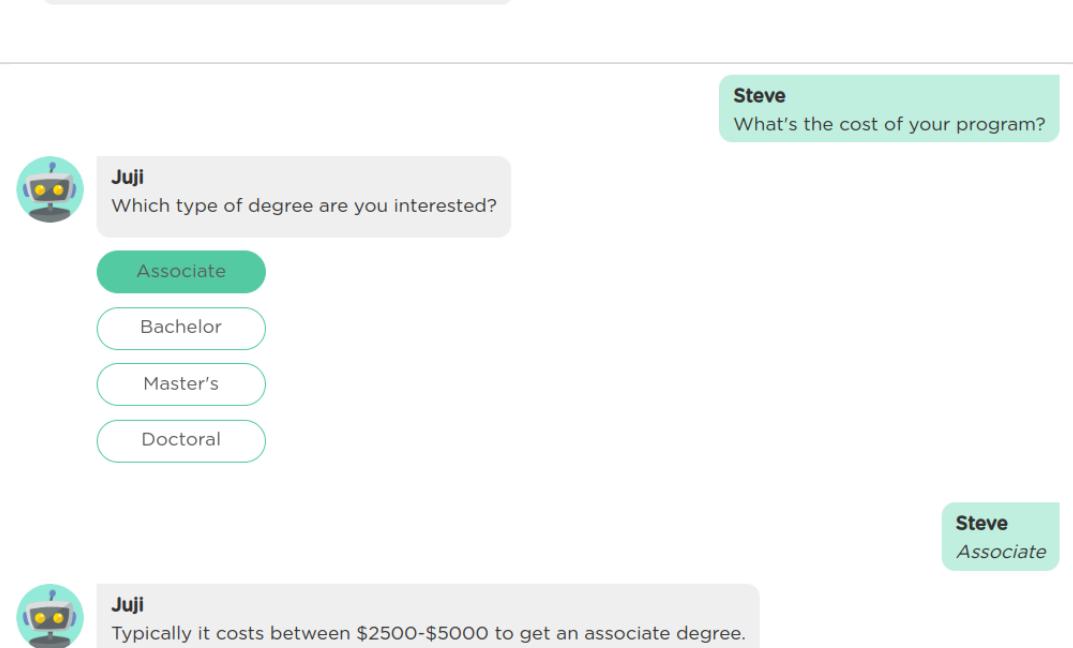
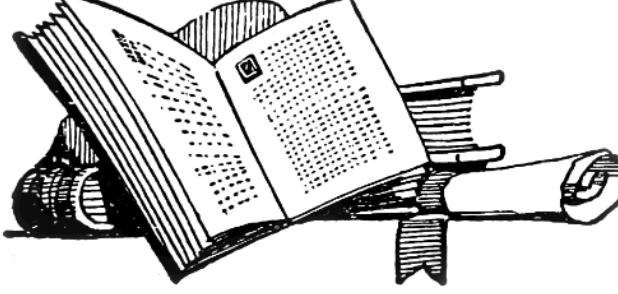
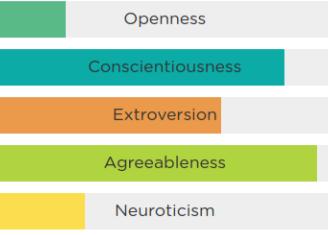
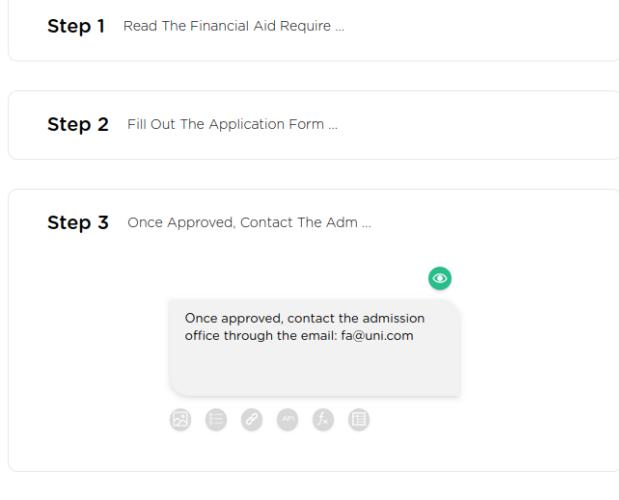
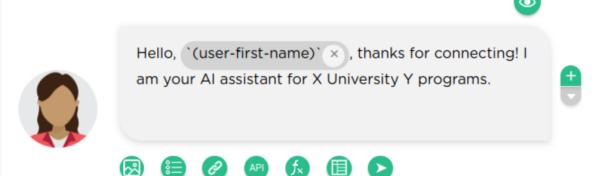
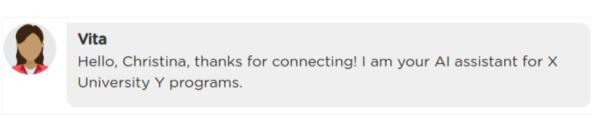
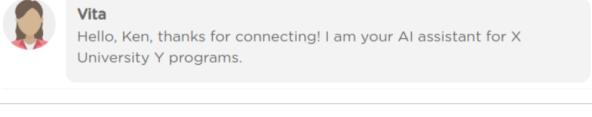
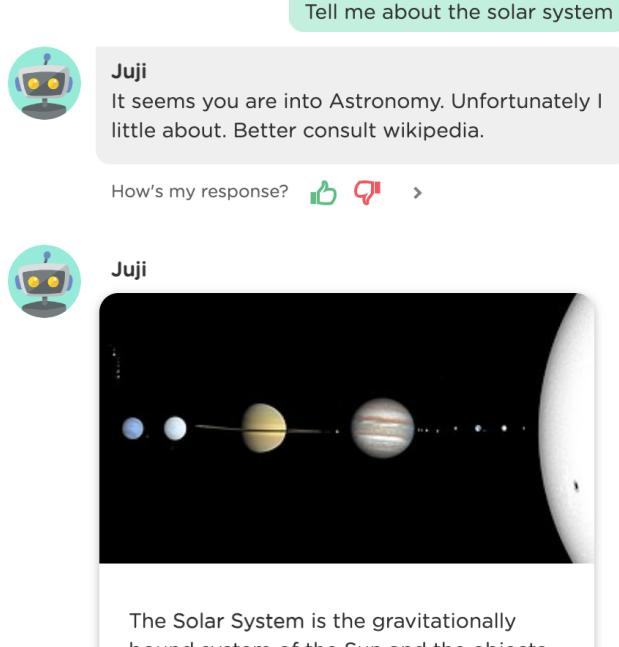
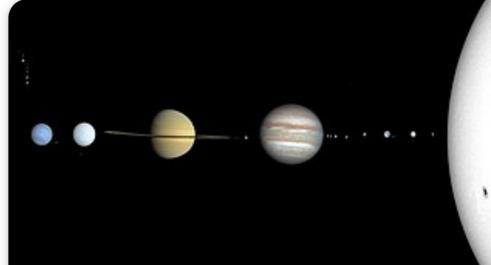
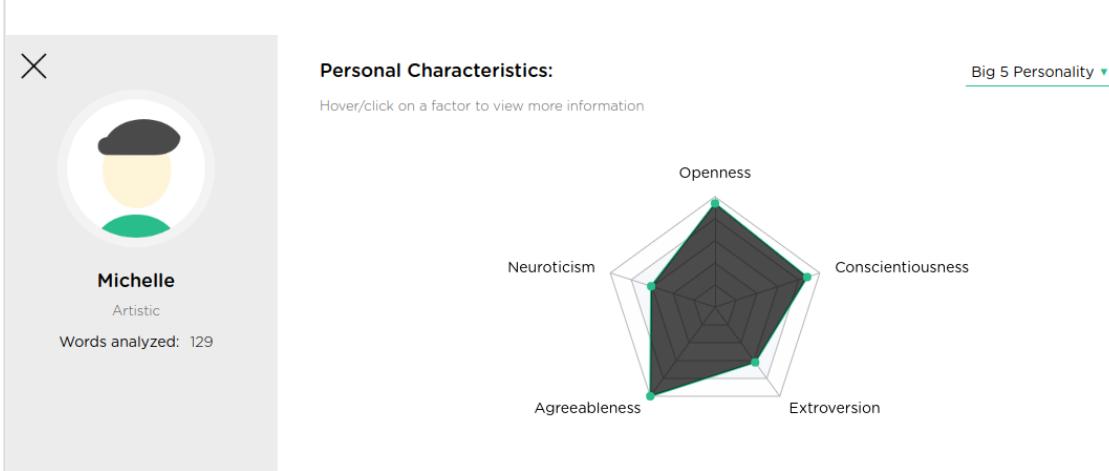
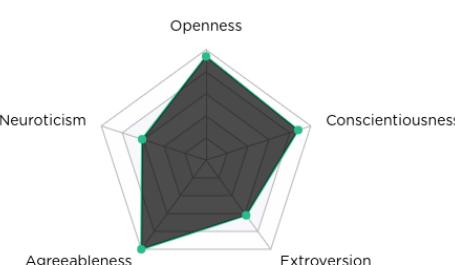
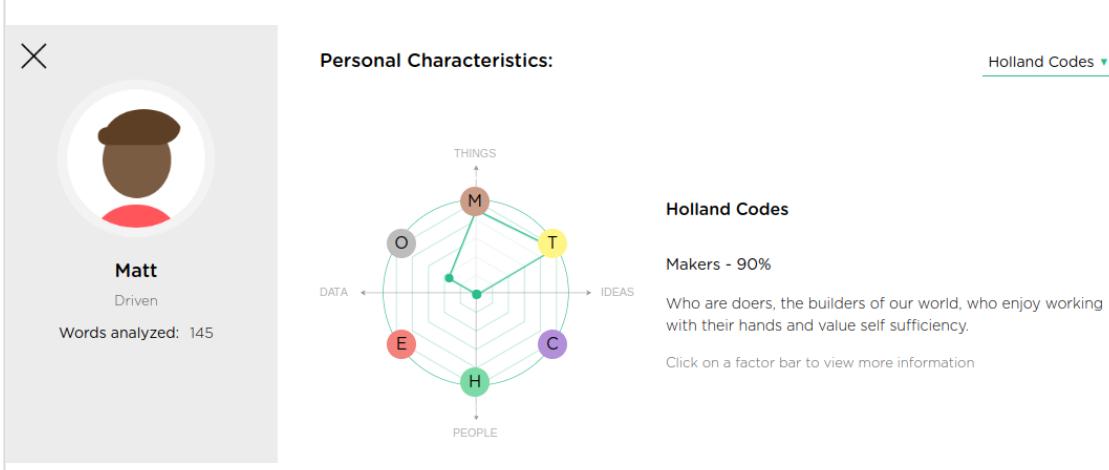
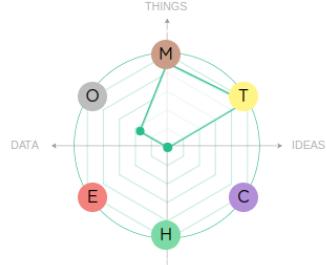
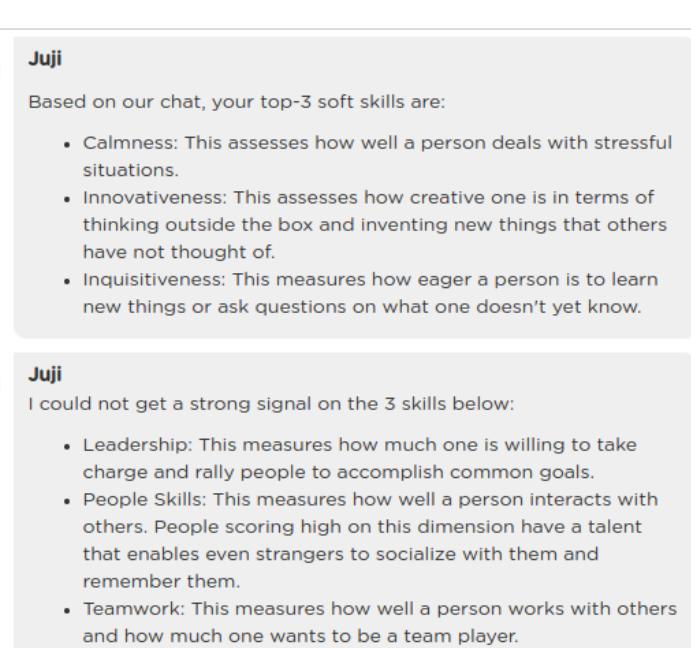


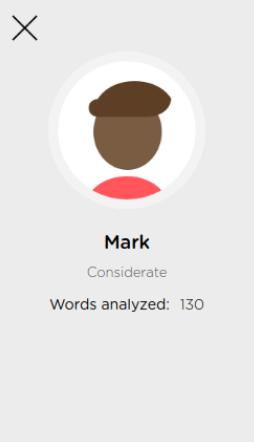
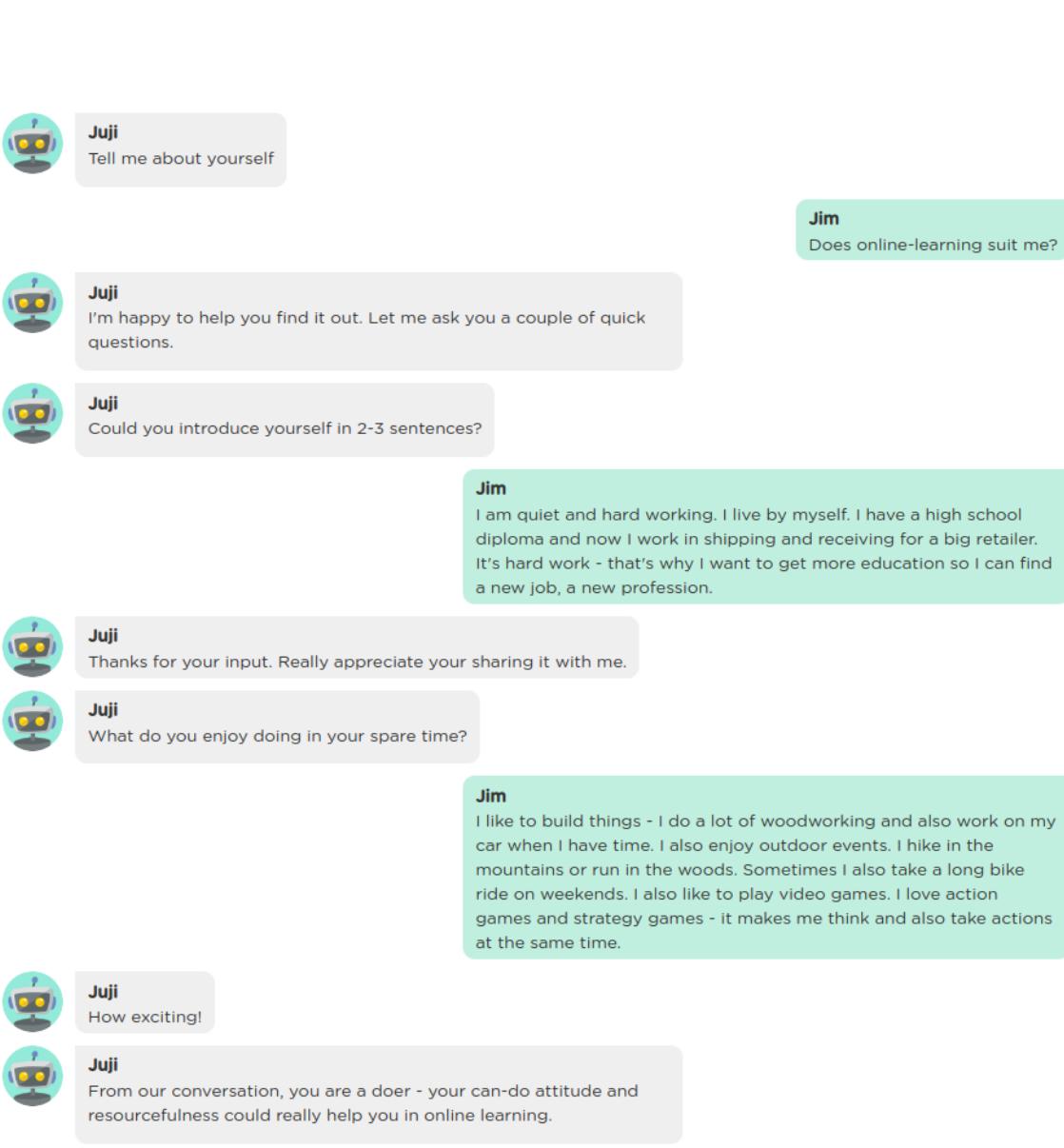
Capability	Key Function Synopsis	Examples
I. User Experience and Business ROI	A chatbot or conversational AI agent is meant to scale out human engagements (e.g., universities with prospective and existing students) through a conversation. A key factor to evaluate a chatbot platform is to assess how well 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 other humans or an AI. Such a conversation requires both conversation parties to collaboratively drive the conversation forward. It should never be a one-way monologue (e.g., user asks questions and a chatbot passively answers; or a chatbot asks questions and takes in whatever a user says). Test if a chatbot option can support following features, which determine whether a conversation would be 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 educational organizations better understand their users (e.g., student interests and feedback) and plan the next best actions (e.g., student conversion or retention). This requires a chatbot to ask both open-ended questions to collect qualitative information as well as choice questions to collect quantitative data	 <p>Michelle People call me Michelle</p>
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>Jason Master's</p>
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>Kate What are your admission criteria?</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 phrased in free text with diverse expressions. A capable chatbot should be able to interpret diverse question expressions.	 <p>Steve What's the cost of your program?</p>
Answer users' free-text questions.	Evaluate how well a chatbot could interpret students' diverse free-text question expressions even for the same question.	
Answer users' complex, free-text questions.	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.	

Capability	Key Function Synopsis	Examples
Automatically recommend answers to similar questions.	<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>	 <b>Vita</b> Hmm... I couldn't interpret your question... However, I am able to answer the following questions: <ol style="list-style-type: none"> <li>1. Am I eligible for financial aid?</li> <li>2. when will the next enrollment period be?</li> <li>3. Will I have access to alumni when I graduate?</li> <li>4. None of above.</li> </ol>
Automatic "HELP" menu generation.	<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>	 <b>Vita</b> I can answer the following questions:  <b>Vita</b> <ul style="list-style-type: none"> <li>• how easy is it to graduate? ▶</li> <li>• what is average starting salary post graduation? ▶</li> <li>• Military students? ▶</li> <li>• how many hours of study per week? ▶</li> <li>• How does this work for a working adult? ▶</li> </ul>  <b>Vita</b> I can answer the following questions:  <b>Vita</b> <ul style="list-style-type: none"> <li>• What are the degree requirements? ▶</li> <li>• application link ▶</li> <li>• max program length ▶</li> </ul>
<b>1.1.3 Abilities to conduct context-sensitive, productive conversations</b>	<p>Just like in 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>	 <b>Juji</b> What's your favorite subject?   <b>Juji</b> Mine would be computer science, in particular AI - Artificial Intelligence.   <b>Juji</b> What do you enjoy doing in your spare time?   <b>Juji</b> understanding people - what they think and how they feel
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>	 <b>Juji</b> What brings you to chat with me today?   <b>Juji</b> Which type of degree are you interested? <div style="display: flex; justify-content: space-around; align-items: center;"> <span>Associate</span> <span>Bachelor</span> <span>Master's</span> <span>Doctoral</span> </div>
Support arbitrary user interruptions	<p>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.</p>	 <b>Juji</b> Typically it costs between \$2500-\$5000 to get an associate degree.   <b>Juji</b> What brings you to chat with me today?

Capability	Key Function Synopsis	Examples
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.	<p>Free-text input with click to text.</p> <p>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.</p>  <p><b>Vita</b> Anytime during our chat, you can text HELP to see what I can do or RESTART to restart our chat.</p> <p><b>Click to Text</b></p> <p><b>HELP</b> ➔ <b>RESTART</b> ➔</p>
Image Message.	Send an image message. Images can be directly uploaded and via an URL.	 <p><b>Vita</b> Books are our friends</p> 
Video Message	Send a video message. Videos can be played directly in a chat.	 <p><b>Vita</b></p>  <p>Watch the video on how to apply for college</p> <p><a href="#">More info here</a></p>
Image Carousel	Send an image carousel with up to 5 images for info comparison.	 <p><b>Juji</b></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Online nursing programs prepare for new career opportunities in Healthcare, e.g., how to apply your skills to the quality and safety of patient care.</p> <p><a href="#">read more</a></p> </div> <div style="text-align: center;">  <p>Our online technology degrees prepare you for the growing field of IT, including cybersecurity, information technology, and more.</p> <p><a href="#">Read More</a></p> </div> <div style="text-align: center;">  <p>Open the door to exciting, new career opportunities with a degree or certificate in business. Do it on your schedule - and your terms.</p> <p><a href="#">Read More</a></p> </div> </div> <p><b>DONE</b></p>
Video Carousel	Send a carousel in a chat with up to 5 videos for info comparison. Videos can be directly played within a chat.	 <p><b>Vita</b></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>How to apply for college</p> <p><a href="#">read more</a></p> </div> <div style="text-align: center;">  <p>Choose a specialization</p> <p><a href="#">read more</a></p> </div> <div style="text-align: center;">  <p>How to work in college</p> <p><a href="#">read more</a></p> </div> </div> <p><b>DONE</b></p>

Capability	Key Function Synopsis	Examples									
Information Graphics	Send an information graphics in a chat to display rich information/insights.	 <p><b>Juji</b> Based on your conversation text, I've inferred your Big 5 personality scores. Please see the chart below.</p> <p><b>Big 5 Personality</b></p> <p>The Big 5 personality traits include five factors (O.C.E.A.N.). Each factor further consists of 6 facets.</p> <p>Your scores are inferred based on 475 words.</p>  <p><b>Openness - 20%</b> measures how much a person is inclined to new experiences or views from six facets</p> <p>Click on another factor bar to view its definition</p> <p><a href="#">View this factor facets</a></p> <p>Apply for financial aid tutorial</p> <p><small>*The label of this topic - 50 chars max</small></p>									
Step by Step Tutorial	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>Customize Tutorial Steps</p>  <p><b>Step 1</b> Read The Financial Aid Require ...</p> <p><b>Step 2</b> Fill Out The Application Form ...</p> <p><b>Step 3</b> Once Approved, Contact The Adm ...</p> <p>Once approved, contact the admission office through the email: fa@uni.com</p> <p>+ Add Step</p> 									
Messages with Hyperlinks	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><b>Juji</b> Here is the academic calendar</p>									
Messages with Bullet Lists	Send a chatbot text message in a bullet list.	 <p><b>Juji</b> The focus of the program is on:</p> <ul style="list-style-type: none"> <li>• how to better understand clients</li> <li>• lead generation tools</li> <li>• set up performance metrics</li> </ul>									
Paraphrasing of Chatbot Messages	Send a message or ask a question with different expressions to make a conversation more natural and engaging.	<p><b>Alternative Chatbot Expressions</b></p> <p>Make changes to the list or select an expression to edit</p> <table border="1"> <tr> <td>Can you tell me about yourself?</td> <td>Re-asking <input type="checkbox"/></td> <td></td> </tr> <tr> <td>Can you describe yourself in a couple sentences?</td> <td>Re-asking <input checked="" type="checkbox"/></td> <td></td> </tr> <tr> <td>How would you describe yourself?</td> <td>Re-asking <input checked="" type="checkbox"/></td> <td></td> </tr> </table>	Can you tell me about yourself?	Re-asking <input type="checkbox"/>		Can you describe yourself in a couple sentences?	Re-asking <input checked="" type="checkbox"/>		How would you describe yourself?	Re-asking <input checked="" type="checkbox"/>	
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How would you describe yourself?	Re-asking <input checked="" type="checkbox"/>										
Dynamic Chatbot Messages Powered by Functions	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.	  									

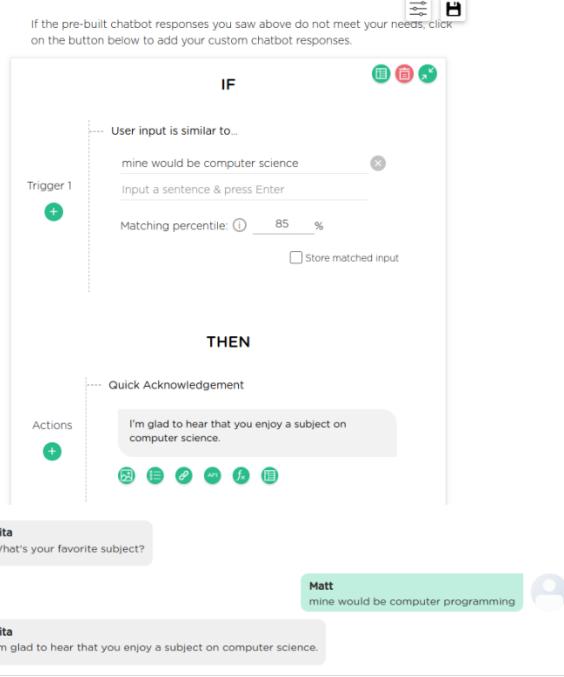
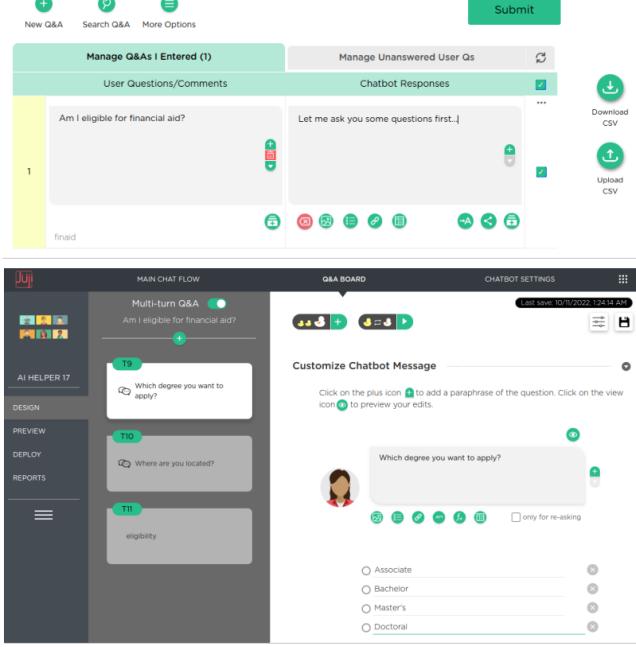
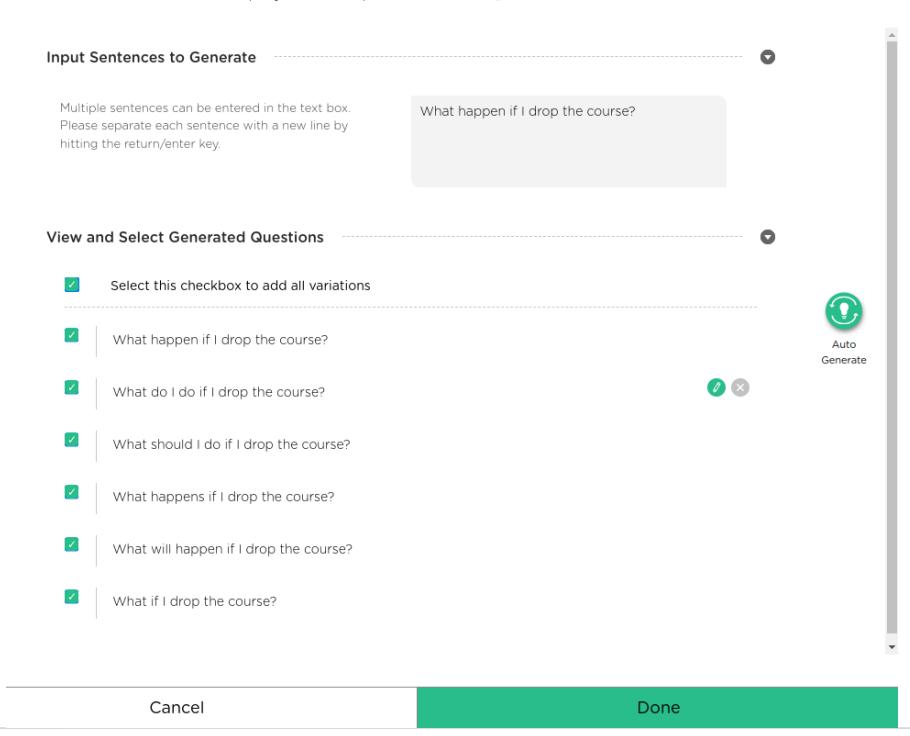
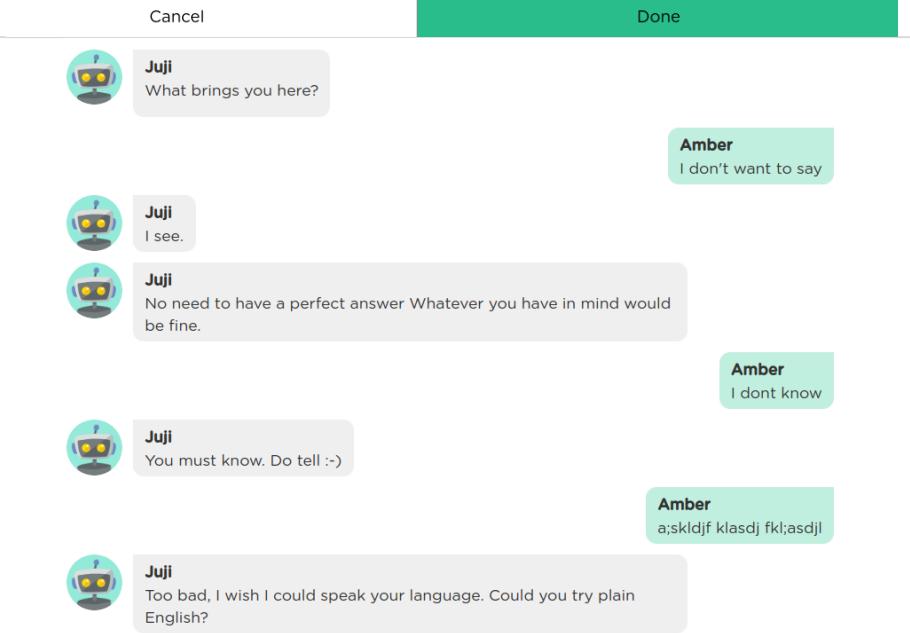
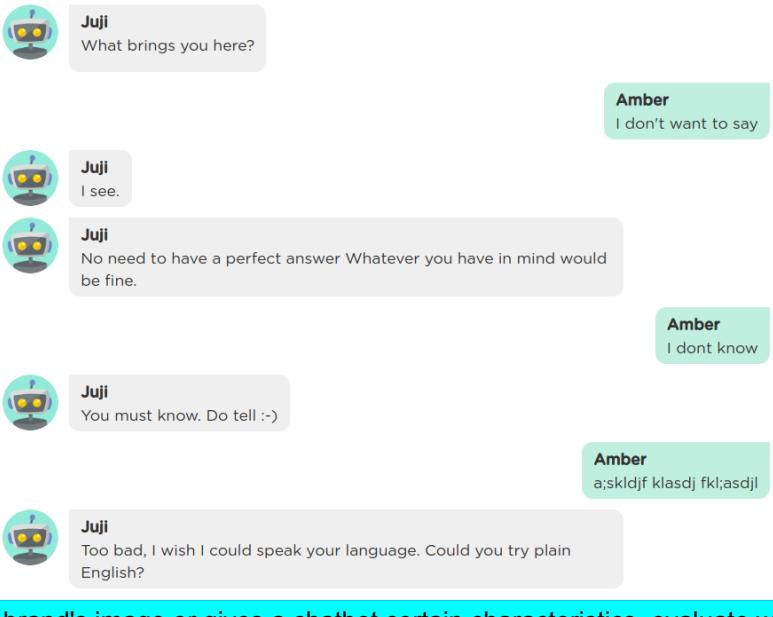
Capability	Key Function Synopsis	Examples
Dynamic Chatbot Messages Powered by API calls	<p>Send a chatbot message customized via API calls. The example shows the call of a wikipedia API to display the information about the solar systems. In an educational solution, a chatbot can make API calls to backend 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>Emma Tell me about the solar system</p> <p>Juji It seems you are into Astronomy. Unfortunately I little about. Better consult wikipedia.</p> <p>How's my response?   </p> <p>Juji</p>  <p>The Solar System is the gravitationally bound system of the Sun and the objects</p>
1.2 Hyper-Personalized, Empathetic Engagements driven by Computational Psychology	<p>Educational organizations hope to understand the unique needs and wants of each student 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>	
1.2.1 Infer psychographic insights to deeply understand users as each unique individuals	<p>Traditional item-based, self-reported personality or psychometric tests are subject to social desirability bias or subjective ratings. A good chatbot solution should be able to automatically infer a user's unique psychographic characteristics, such as interests, personality, and needs, from a conversation without asking any of the self-reported scaled questions.</p>	 <p>Personal Characteristics: Hover/click on a factor to view more information</p> <p>Big 5 Personality ▾</p> <p>Michelle Artistic Words analyzed: 129</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 relate to student academic achievements and learning styles.</p>	
Infer Holland Codes	<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>	 <p>Personal Characteristics: Click on a factor bar to view more information</p> <p>Holland Codes ▾</p> <p>Matt Driven Words analyzed: 145</p> 
Infer Soft Skills	<p>Evaluate if a chatbot can auto-infer a user's 14 soft skill scores, such as Collaboration and Resourcefulness. Such information may be used by human advisors to provide personalized learning advice or guidance.</p>	 <p>Juji Based on our chat, your top-3 soft skills are:</p> <ul style="list-style-type: none"> <li>Calmness: This assesses how well a person deals with stressful situations.</li> <li>Innovativeness: This assesses how creative one is in terms of thinking outside the box and inventing new things that others have not thought of.</li> <li>Inquisitiveness: This measures how eager a person is to learn new things or ask questions on what one doesn't yet know.</li> </ul> <p>Juji I could not get a strong signal on the 3 skills below:</p> <ul style="list-style-type: none"> <li>Leadership: This measures how much one is willing to take charge and rally people to accomplish common goals.</li> <li>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.</li> <li>Teamwork: This measures how well a person works with others and how much one wants to be a team player.</li> </ul>

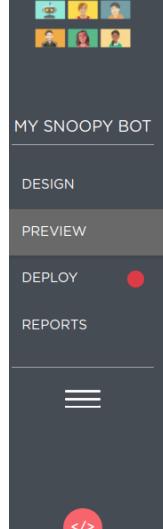
Capability	Key Function Synopsis	Examples														
Infer Moral Characters	A chatbot auto-infers a user's 6 moral characters, such as Honesty and Compassion from a conversation. Such information may be used by human advisors to provide personalized learning advice or guidance.															
Infer 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:</p> <table border="1"> <tr><td>Sophisticated Shopper</td><td>11%</td></tr> <tr><td>Achiever</td><td>1%</td></tr> <tr><td>Explorer</td><td>1%</td></tr> <tr><td>Value Shopper</td><td>11%</td></tr> <tr><td>Smart Shopper</td><td>1%</td></tr> <tr><td>DIYer</td><td>1%</td></tr> <tr><td>Aspirer</td><td>1%</td></tr> </table> <p>Shopper DNA</p> <p>Sophisticated Shopper - 11% Who are successful and have a sophisticated taste. Click on a factor bar to view more information</p>	Sophisticated Shopper	11%	Achiever	1%	Explorer	1%	Value Shopper	11%	Smart Shopper	1%	DIYer	1%	Aspirer	1%
Sophisticated Shopper	11%															
Achiever	1%															
Explorer	1%															
Value Shopper	11%															
Smart Shopper	1%															
DIYer	1%															
Aspirer	1%															
<b>1.2.2 Deliver genuine advices and messages to help and persuade users based on their psychographic characteristics</b>	People are more likely to resonate well with messages that align with their interests, psychological needs, and personality. Evaluate whether a chatbot platform allows you to customize chatbot messages based on one's interests, psychological needs, and personality.															
Hyper-personalized messages per Big 5 Personality	A chatbot sends hyper-personalized messages and advices to students based on their inferred Big 5 personality trait scores.	 <p>Jiji Tell me about yourself</p> <p>Jim Does online-learning suit me?</p> <p>Jiji I'm happy to help you find it out. Let me ask you a couple of quick questions.</p> <p>Jiji Could you introduce yourself in 2-3 sentences?</p> <p>Jim 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.</p> <p>Jiji Thanks for your input. Really appreciate your sharing it with me.</p> <p>Jiji What do you enjoy doing in your spare time?</p> <p>Jim 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>Jiji How exciting!</p> <p>Jiji From our conversation, you are a doer - your can-do attitude and resourcefulness could really help you in online learning.</p>														

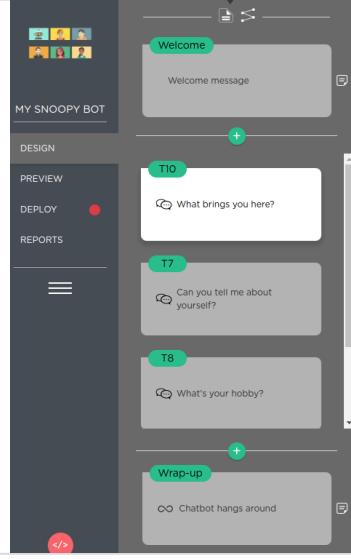
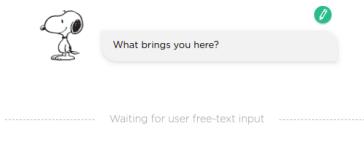
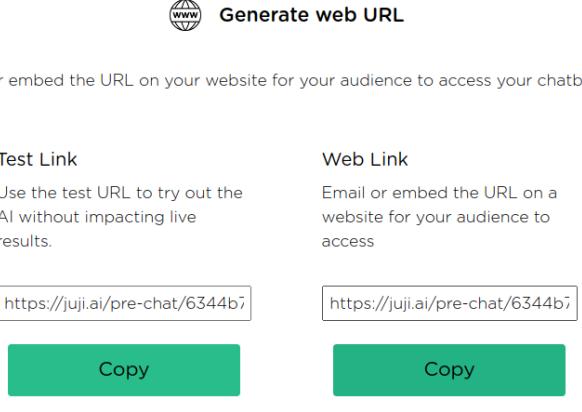
Capability	Key Function Synopsis	Examples
Hyper-personalized message templates per Holland Code	<p>This is a message template that shows how to send personalized messages based on one's inferred Holland Codes.</p>	<p>Select a DNA below to personalize its message</p> <p>6/6 active message(s) 0/6 skipped message(s)</p> <p><b>Thinker</b> Who are curious investigators, the likes of Bill Gates, enjoying reading, problem solving, and researching</p>  <p>You seem inquisitive and thoughtful. Our world definitely needs more thinkers like you!</p> <input type="checkbox"/> Skip message for thinker <p><b>Maker</b> Who are doers and the builders of the world, like MacGyver, enjoying working with their hands and valuing self sufficiency</p> <p><b>Mover And Shaker</b> Who have type A personality, similar to that of Mark Zuckerberg, adventurous, hardworking, and ambitious</p> <p><b>Organizer</b> Who are model citizens and great managers, similar to that of Tim Cook, orderly, thorough, and precise</p> <p><b>Creator</b> Who have type B personality, just like Lady Gaga, living for the fun of life and relying on feelings, ideas, and imagination</p> <p><b>Helper</b> Who are the humanists like Mother Teresa, striving to help others and improve society</p>
Hyper-personalized message templates per Shopper DNA	<p>This is a message template that shows how to send personalized messages based on one's inferred Shopper DNA</p>	<p>Select a DNA below to personalize its message</p> <p>7/7 active message(s) 0/7 skipped message(s)</p> <p><b>Smart Shopper</b> Who are analytical and make informed economic decisions</p>  <p>From your chat, you seem analytical and smart. You'd appreciate our product, which is backed by years of research and testing.</p> <input type="checkbox"/> Skip message for smart shopper <p><b>DIYer</b> Who are anti-materialistic and shop for value, durability, and comfort</p> <p><b>Explorer</b> Who emphasize identity and enjoy new and unique experiences</p> <p><b>Achiever</b> Who are goal-oriented and make economic decisions based on the needs of career and family</p> <p><b>Sophisticated Shopper</b> Who are successful and have a sophisticated taste</p> <p><b>Value Shopper</b> Who are cautious and prefer big, well-known brands</p> <p><b>Aspiring Shopper</b> Who enjoy shopping as social activities, and love fun and trendy stuff</p>
<b>II. Time to Value and Cost of Ownership: Chatbot Customization, Testing, and Deployment</b>	<p>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.</p>	
<b>2.1 Reusable Conversational AI</b>	<p>Building AI from scratch is a daunting task, as it requires AI expertise, software engineering skills, not to mention large amounts of resources including training data. 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 (analogously, comparing a professionally-built turnkey house vs. a DIY fixer upper by amateurs).</p>	

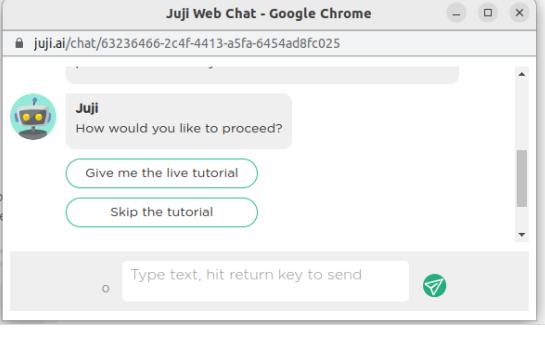
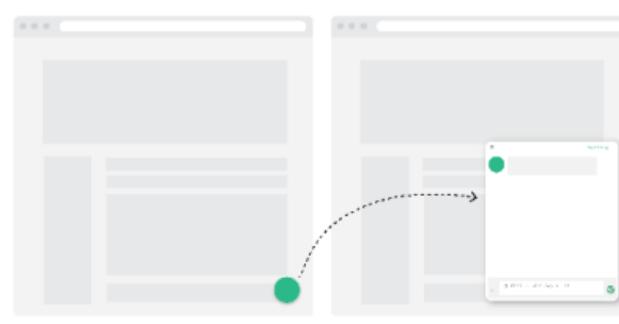
Capability	Key Function Synopsis	Examples
AI Chatbot Templates	<p>Evaluate whether a whole AI chatbot template can be reused to conduct conversations with ZERO training. Typically a pre-built AI chatbot template has pre-built, often domain-specific workflow (chat flow) and Q&amp;As. It is important to 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>What do you intend to use your AI Helper for? Choose one of our templates to get started</p> <p>General    HR    <b>Education</b>    Healthcare    All</p>
Multi-turn conversations by topic	<p>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.</p>	<p>Juji Could you introduce yourself in 2-3 sentences?</p> <p>Patrick I don't have much to say</p> <p>Juji Now I am puzzled... Since you came to chat w/ me, we ought to make a proper intro to each other :-).</p> <p>Juji I'll ask again, could you say a bit about yourself?</p> <p>Patrick ok.. I am a student at a business school. I am graduating later this year</p> <p>Juji Thanks for sharing with me what you do. You are way smarter than I am.</p>
Entity Extraction	<p>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.</p>	<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>Stranger People call me Michelle</p> <p>Juji Got it. Just to confirm, the first name is: Michelle</p>
Sentiment Analysis	<p>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.</p>	<p>Juji How is your day?</p> <p>Tom It's been great so far</p> <p>Juji Good to hear your positive tone.</p> <p>Juji What happened that made you feel this way?</p>

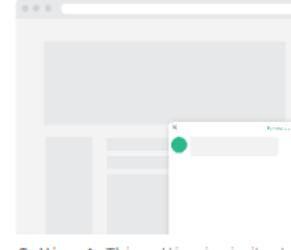
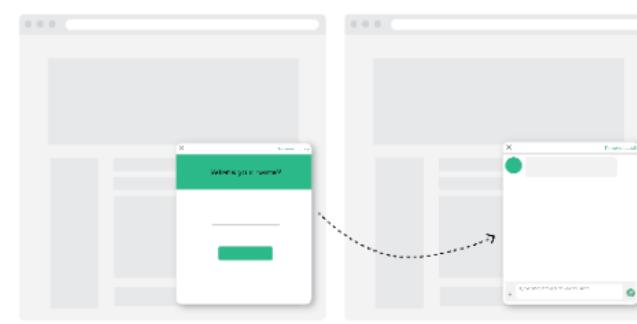
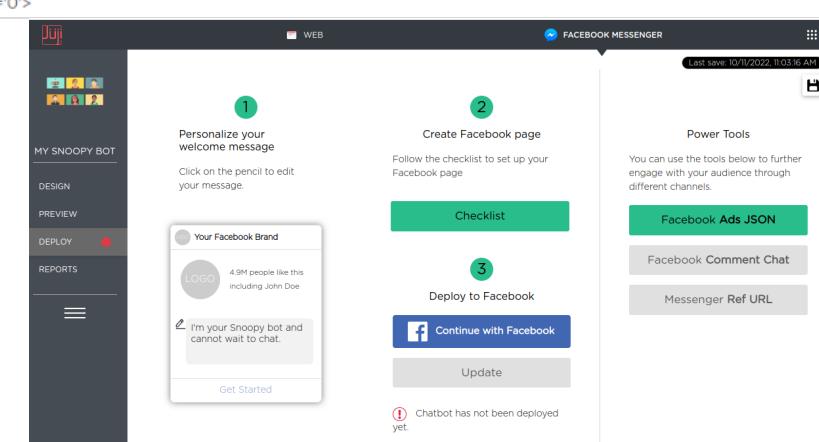
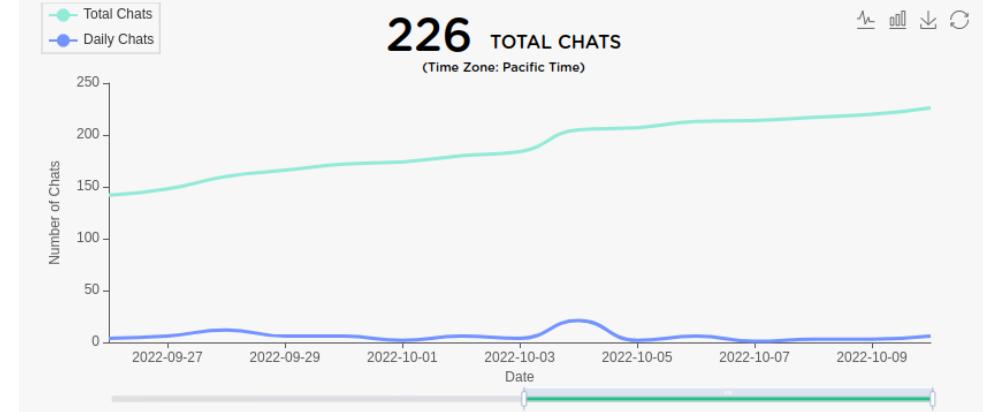
Capability	Key Function Synopsis	Examples
Question Templates	Evaluate whether and how well a chatbot can automatically learn hundreds of thousands user expressions from a couple of keywords. The example on the right shows the user inputs just a couple of keywords and the chatbot can auto-recognize diverse 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.	
Dialog Management	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.	
2.2 Customizable AI: Chatbot Content	All AI chatbot solutions require certain customization to conform 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. Following includes the frequent customizations that are often done to a chatbot solution and their evaluation.	
Customize chat flows	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 <b>automatically</b> support the interleaving of these two tasks in ONE workflow regardless the number of questions a user will ask.	
Customize chatbot questions	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 <b>automatically</b> handles user responses to the questions.	

Capability	Key Function 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&amp;A including multi-turn Q&amp;As and automatic support of their arbitrary nesting (e.g., starting a Q&amp;A in the middle of another Q&amp;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.</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>	
2.3 Customizable Chatbot Settings	<p>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.</p>	

Capability	Key Function Synopsis	Examples
	Customize chatbot avatar	<p>Persona</p>  <p>Snoopy Snoopy is here to chat</p>
	Customize Conversation Tempo	<p>Conversation Tempo</p> <p>Turn pace: 0 second(s) Message pace: 1500 millisecond(s) Refresh duration: 180 minute(s)</p>
	Enable and Customize Spelling Checker	<p>User Input Control</p> <p>Spelling Checker <input checked="" type="checkbox"/></p> <p>Special Words to be Excluded Please separate each word by a comma</p> <p>IBM, Alexa, Fb</p>
	Customize User feedback Options	<p>Enable user feedback   during chat: (Select a design below)</p> <p><input checked="" type="checkbox"/></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Juji This is how Design 1 will look like in chat How's my response?  </p> </div> <div style="text-align: center;">  <p>Juji This is how Design 2 will look like in chat How's my response?   Leave a comment <input type="button" value="Submit"/></p> </div> </div>
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 it can be quickly and iteratively improved based on the testing.	<p>Reminding collaborators to customize Q&amp;As: <input checked="" type="checkbox"/></p> <p>Set up your <u>chatbot</u> to support automated free-text Q&amp;A. Download the <u>CSV</u> template to set up your custom Q&amp;A list.</p>
Instant live chatbot preview and testing	Evaluate whether one can preview or test a live chatbot during the design process.	 <p>Snoopy Hello, Wenxi, thanks for connecting! I am your AI helper and cannot wait to chat w/ you.</p> <p>Snoopy What brings you here?</p> <p>Type text, hit return key to send <input type="button" value="Send"/></p>

Capability	Key Function 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	 <p>Customize Chatbot Message</p> <p>Click anywhere in the text bubble or on the pencil icon  to enter a question that your chatbot will ask. Try to ask it in a conversational tone.</p>  <p>Reuse Pre-Built Chatbot Responses</p> <p>Based on the question you entered above, Juji finds pre-built chatbot responses that match the topic. Use the input field below or click on the magnifying glass icon  to search and browse all available topics.</p> <p>What brings you here?</p> <p>Enter a question or phrase to find a topic - 50 chars max</p> 
2.5 Chatbot Deployment and Update	Evaluate how easy and quick a chatbot can be deployed and how a production chatbot can be updated.	 <p>Test Link</p> <p>Use the test URL to try out the AI without impacting live results.</p> <p><a href="https://juji.ai/pre-chat/6344b7">https://juji.ai/pre-chat/6344b7</a></p> <p>Copy</p> <p>Web Link</p> <p>Email or embed the URL on a website for your audience to access</p> <p><a href="https://juji.ai/pre-chat/6344b7">https://juji.ai/pre-chat/6344b7</a></p> <p>Copy</p> <p> Chatbot deployed on 10/10/2022. Version 1. Click on the "Manage" button to deploy the updates.</p>
One-click deployment (URL)	Deployment should be made simple and quick.	 <p>4 Deploy</p> <p> Update Chatbot Release </p> <p>Your chatbot is updated with new messages or knowledge. Whenever you're ready, publish the changes to your audience.</p> <p>Update</p> <p>New Release</p>
Deployment customization options (website)	A chatbot should be updated easily.	<p>1 Personalize your welcome message</p> <p>This is what your audience will see before chatting. Click to edit your message.</p> <p> I'm your Snoopy bot and cannot wait to chat.</p>  <p>First Name</p> <p>Last Name</p> <p>Email</p> <p>Start to Chat</p>
Embedded website deployment (avatar)	A chatbot might be used for different tasks and should be allowed to be configured to suit different tasks. Below lists some of frequently used options.	 <p>ILLINOIS Gies College of Business</p> <p>iMBA</p> <p>Online MBA at the University of Illinois Business mastery plus leadership skills</p> <p>GET INFO</p> <p>APPLY NOW</p> <p>Cannot wait to chat!</p> <p>GIES</p>

Capability	Key Function Synopsis	Examples
Embedded website deployment (cover page)	This is to show the chat cover page on a website.	 <p><b>Apply with Ava</b></p> <p>Have you watched the movie Her? Are you a big fan of Star Trek? Have you ever aspired to dazzle the world by instilling the intelligence, empathy, and responsibility into a Samantha or Data?</p> <p>If your answer is yes, join Juji to realize your aspiration.</p> <p><b>APPLY NOW »</b></p> <p>First Name _____</p> <p>Last Name _____</p> <p>Email _____</p> <p><b>Start to Chat</b></p>
Popped-out website deployment	This option allows a chat window to pop up so it can be moved around without obscuring the content behind the window.	<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 <a href="#">enable your chatbot window to pop out</a> or to <a href="#">stay open across web pages</a>. 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><b>Web URL</b> <input type="text" value="https://mycompany.com"/></p> <p><b>Customize Chat Icon on Website</b></p> <p>You can customize the chat icon appearing on a web page by changing its avatar. You must re-copy and paste the web plugin code (see below).</p>  <p><b>Juji Web Chat - Google Chrome</b></p>  <p><b>Install Web plugin code (Optional)</b></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><b>Setting 1:</b> 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><b>Setting 2:</b> 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> 
	This configures how a chat will	

Capability	Key Function Synopsis	Examples
Customize chat start options	<p><b>Key Function Synopsis</b></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><b>Setting 3:</b> 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><b>Setting 4:</b> 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 &lt;body&gt; tag on each page where you want the plugin to appear.</p> <p><b>Copy Code</b></p> <pre>&lt;div id='jujibot-bubble' aria-label='Chat pop-up text bubble.' alt='Chat pop-up text bubble.' tabIndex='0'&gt;</pre>
Facebook Messenger deployment on FB pages	Deploy a chatbot on FB messenger	
<b>2.6 Real-Time Reporting and Analytics</b>	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.	
<b>2.6.1 Real-Time Chat Stats</b>	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.	
Chat traffic volume by date	How many chat sessions in total or by date	
Chat duration (average)	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><b>AVERAGE ENGAGEMENT DURATION</b></p> <p><b>5.66 min</b></p> 

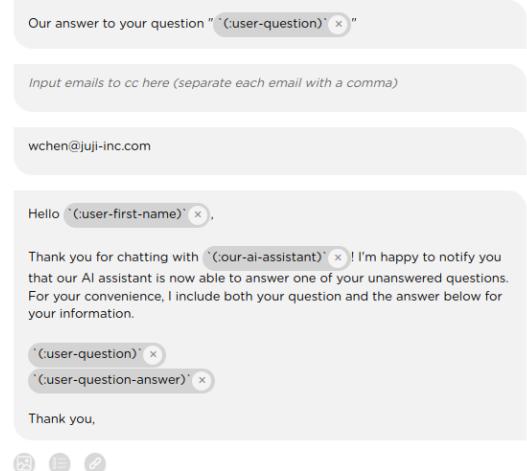
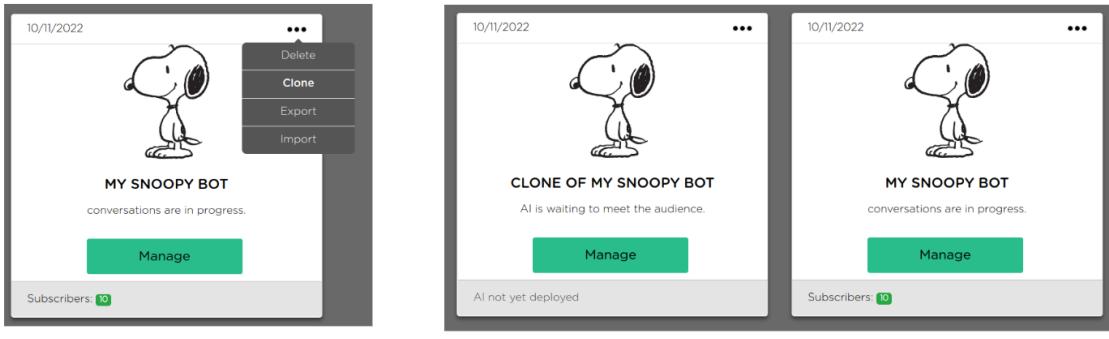
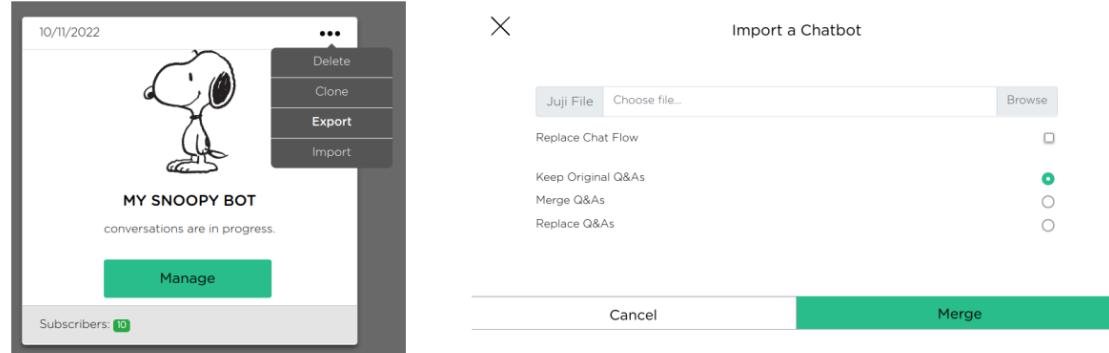
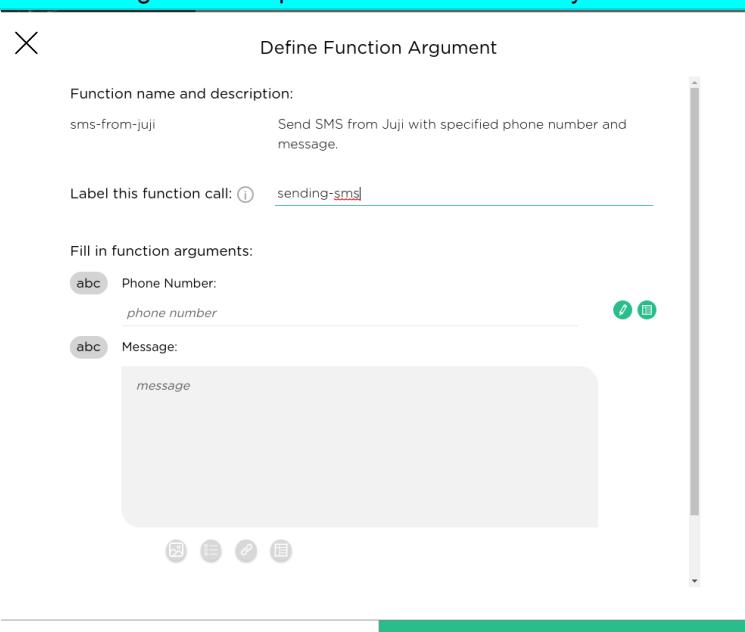
Capability	Key Function Synopsis	Examples																																																																																																																																																																																											
Chat start time	When do people typically start their chat. This could give you insights on your user habits as well as when you can safely update/upgrade your chatbot if needed.	<p>CHAT TRAFFIC BY TIME OF DAY</p> <p>Number of Chats</p> <p>Time (24 Hours PT)</p> <table border="1"> <thead> <tr> <th>Time Period</th> <th>Number of Chats</th> </tr> </thead> <tbody> <tr><td>0-3</td><td>45</td></tr> <tr><td>4-7</td><td>45</td></tr> <tr><td>8-11</td><td>55</td></tr> <tr><td>12-15</td><td>42</td></tr> <tr><td>16-19</td><td>15</td></tr> <tr><td>20-23</td><td>22</td></tr> </tbody> </table>	Time Period	Number of Chats	0-3	45	4-7	45	8-11	55	12-15	42	16-19	15	20-23	22																																																																																																																																																																													
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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.	<p>Input &amp; "Enter" to search user</p> <p>CHAT DATA</p> <p>Sep 1, 2022 - Sep 30, 2022</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Location</th> <th>Completed</th> <th>Start</th> <th>Finish</th> <th>Tell me about yourself</th> </tr> </thead> <tbody> <tr><td>Mark</td><td>Sunnyvale California</td><td>Yes</td><td>2022-09-19 17:06:25</td><td>2022-09-19 17:06:47</td><td>I'm a typical introvert and would like to live by myself.</td></tr> <tr><td>Jim</td><td>Sunnyvale California</td><td>Yes</td><td>2022-09-19 17:05:51</td><td>2022-09-19 17:06:12</td><td>I am quiet and hard working. I live by myself.</td></tr> <tr><td>Matt</td><td>Sunnyvale California</td><td>Yes</td><td>2022-09-19 17:05:14</td><td>2022-09-19 17:05:37</td><td>I'm a quiet and calm person. I live by myself.</td></tr> <tr><td>Michelle</td><td>Sunnyvale California</td><td>Yes</td><td>2022-09-19 17:04:35</td><td>2022-09-19 17:05:04</td><td>I am a high school graduate and currently work part-time.</td></tr> <tr><td>Emma</td><td>Sunnyvale California</td><td>Yes</td><td>2022-09-19 17:02:11</td><td>2022-09-19 17:02:42</td><td>I am an outgoing and happy person - close to family and friends.</td></tr> </tbody> </table> <p>Total Number of Users Retrieved: 5</p>	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 live by myself.	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 myself.	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 myself.	Michelle	Sunnyvale California	Yes	2022-09-19 17:04:35	2022-09-19 17:05:04	I am a high school graduate and currently work part-time.	Emma	Sunnyvale California	Yes	2022-09-19 17:02:11	2022-09-19 17:02:42	I am an outgoing and happy person - close to family and friends.																																																																																																																																																							
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User Location	Where users come from. This data can be used in conjunction of your chatbot campaigns to see where it attracts the audience.	<p>Top Audience Location</p> <p>Audience Location By Date</p> <p>TOP AUDIENCE LOCATION</p> <p>AUDIENCE LOCATION U.S. STATE MAP</p> <p>Legend:</p> <ul style="list-style-type: none"> <li>California, United States: 380 (38.23%)</li> <li>United States: 137 (13.78%)</li> <li>New York, United States: 68 (6.84%)</li> <li>Texas, United States: 41 (4.12%)</li> <li>Illinois, United States: 36 (3.62%)</li> <li>Other / State Unknown: 332 (33.40%)</li> </ul> <p>High 380 Low 0</p>																																																																																																																																																																																											
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.	<table border="1"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> <th>G</th> <th>H</th> <th>I</th> <th>J</th> </tr> </thead> <tbody> <tr><td>1</td><td>First Name</td><td>Last Name</td><td>User Agent</td><td></td><td></td><td></td><td></td><td></td><td></td><td>Channel</td></tr> <tr><td>2</td><td>Mayed</td><td>BuAabed</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>facebook</td></tr> <tr><td>3</td><td>James</td><td>Chang</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>facebook</td></tr> <tr><td>4</td><td>Huahai</td><td>Yang</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>facebook</td></tr> <tr><td>5</td><td>Amy</td><td>Pottorff</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>facebook</td></tr> <tr><td>6</td><td>Frank</td><td>Wang</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>facebook</td></tr> <tr><td>7</td><td>Barry</td><td>Hiew</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>facebook</td></tr> <tr><td>8</td><td>Huahai</td><td>Yang</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>facebook</td></tr> <tr><td>9</td><td>Wenxi</td><td></td><td>Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:100.0) Gecko/20100101 Firefox/100.0</td><td></td><td></td><td></td><td></td><td></td><td></td><td>web</td></tr> <tr><td>10</td><td>Michelle</td><td></td><td>Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari/537.36</td><td></td><td></td><td></td><td></td><td></td><td></td><td>web</td></tr> <tr><td>11</td><td>Julia</td><td></td><td>Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari/537.36</td><td></td><td></td><td></td><td></td><td></td><td></td><td>web</td></tr> <tr><td>12</td><td>hh</td><td></td><td>Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/101.0.4951.64 Safari/537.36</td><td></td><td></td><td></td><td></td><td></td><td></td><td>web</td></tr> <tr><td>13</td><td>viswa</td><td></td><td>Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari/537.36</td><td></td><td></td><td></td><td></td><td></td><td></td><td>web</td></tr> <tr><td>14</td><td>Chiman</td><td></td><td>Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/101.0.4951.64 Safari/537.36</td><td></td><td></td><td></td><td></td><td></td><td></td><td>web</td></tr> <tr><td>15</td><td>Ann</td><td></td><td>Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari/537.36</td><td></td><td></td><td></td><td></td><td></td><td></td><td>web</td></tr> <tr><td>16</td><td>Mark</td><td></td><td>Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_6) AppleWebKit/605.1.15 (KHTML, like Gecko) Version/15.4 Safari/605.1.15</td><td></td><td></td><td></td><td></td><td></td><td></td><td>web</td></tr> </tbody> </table>		A	B	C	D	E	F	G	H	I	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/537.36							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/537.36							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/537.36							web	13	viswa		Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/102.0.5005.61 Safari/537.36							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/537.36							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/537.36							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/605.1.15							web
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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.	<p>User Question Analytics</p> <p>TOTAL ASKED 2339</p> <p>PERCENT OF QUESTIONS ANSWERED</p> <p>ANSWER RATE</p> <p>100%</p> <p>Answered</p> <p>Unanswered (0)</p> <p>Question/Comment</p> <p>User   (147)</p> <p>Frequency</p> <p>What are the difference in your products? 62</p> <p>Tell me what your public pricing plans are 48</p> <p>how does no-code ai chatbot works? 45</p>																																																																																																																																																																																											
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.																																																																																																																																																																																												

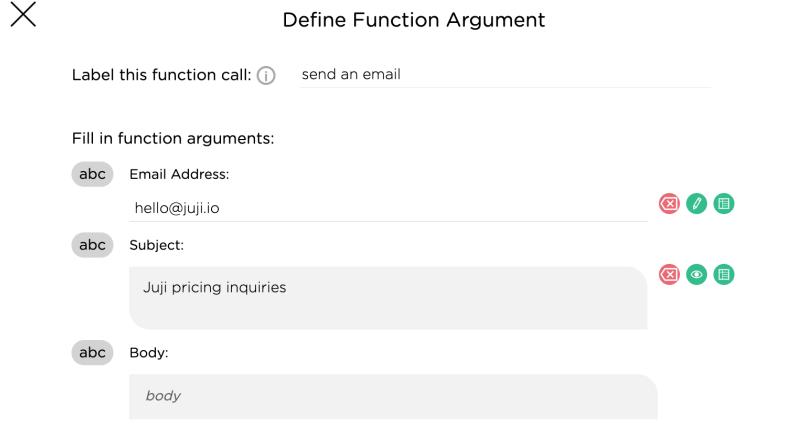
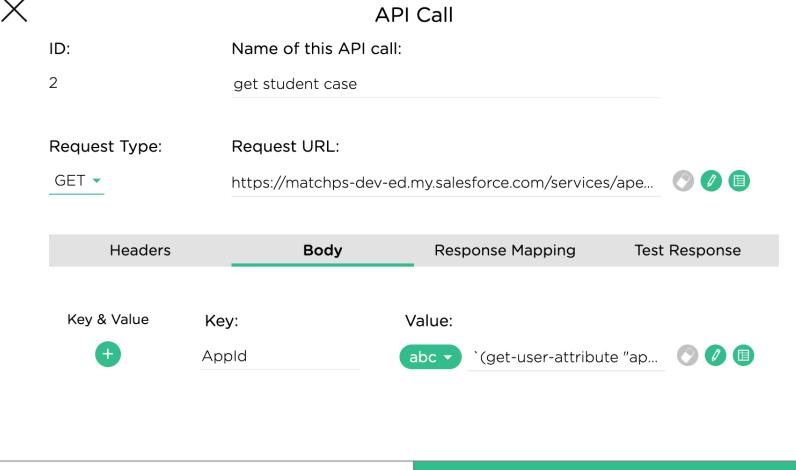
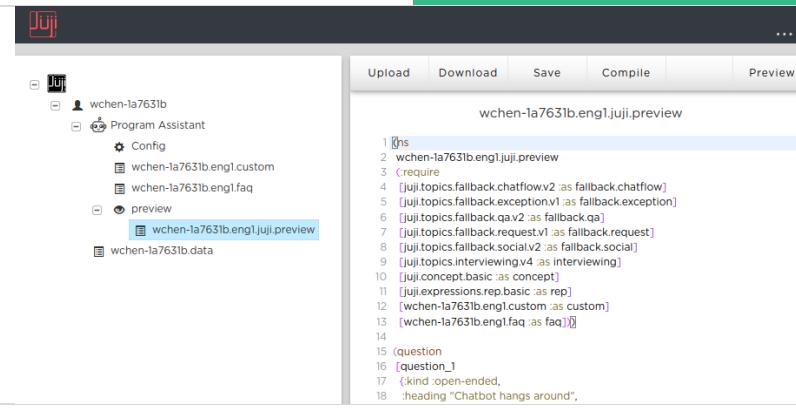
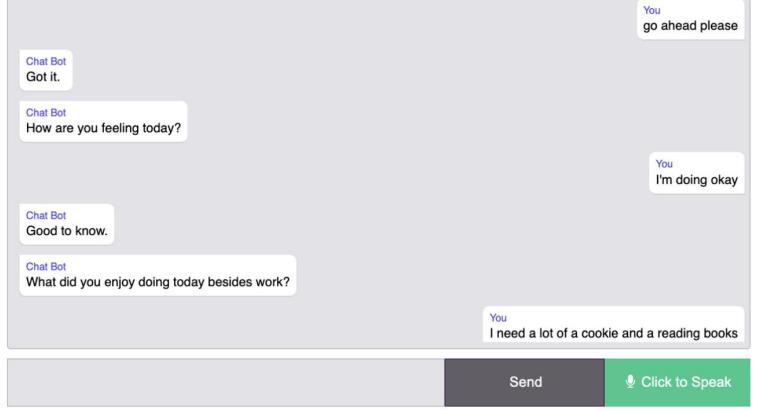
Capability	Key Function Synopsis	Examples																				
User feedback analytics	<p>This gives an overview of user feedback received, including the number of total feedbacks, both positive and negative feedback or user comments. This enables you to understand your chatbot behavior as well as your 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><b>Help Me Fix It</b></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"> <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> </tbody> </table> <p><b>Probable Cause 1</b> 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><b>Probable Cause 2</b> Although the question match is correct due to human error and/or more answers of the</p> <p><b>Act Now</b></p> <p><b>Topic Analysis</b></p> <p>WHAT SHOULD WE TALK ABOUT FIRST? TOTAL RESULTS</p> <table border="1"> <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> <p>WHAT SHOULD WE TALK ABOUT FIRST? DAY TO DAY RESULTS</p> <p>User Response Count</p> <p>Date: 2022-05-06 to 2022-09-23</p> <p>Legend: Walnuts (orange), Something else (green)</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		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
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2.6.3 Real-Time User Response Analytics	<p>The metrics below summarize user responses to chatbot questions.</p>	<p><b>Quantitative Responses (choices)</b></p> <table border="1"> <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> <p><b>Topic Analysis</b></p> <p>WHAT SHOULD WE TALK ABOUT FIRST? TOTAL RESULTS</p> <p>WHAT SHOULD WE TALK ABOUT FIRST? DAY TO DAY RESULTS</p> <p>User Response Count</p> <p>Date: 2022-05-06 to 2022-09-23</p> <p>Legend: Walnuts (orange), Something else (green)</p>	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										
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Quantitative user response analytics (multiple visual analytics charts)	<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>	<p><b>WHAT SHOULD WE TALK ABOUT FIRST? TOTAL RESULTS</b></p> <p>WHAT SHOULD WE TALK ABOUT FIRST? DAY TO DAY RESULTS</p> <p>User Response Count</p> <p>Date: 2022-05-06 to 2022-09-23</p> <p>Legend: Walnuts (orange), Something else (green)</p>																				
Free-text user response analytics by sentiment	<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>	<p><b>HOW'S YOUR ONBOARDING EXPERIENCE? TOTAL SENTIMENT</b></p> <p>Negative - 8.34% Count: 1 Example: I have a hard time during the onboarding - it didn't go smoothly as I expected.</p> <p><b>HOW'S YOUR ONBOARDING EXPERIENCE? DAY TO DAY SENTIMENT</b></p> <p>User Response Count</p> <p>Date: 2022-09-17 to 2022-09-21</p> <p>Legend: negative (red), somewhat negative (orange), neutral (yellow), somewhat positive (green), positive (blue)</p>																				



Capability	Key Function 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><b>Value Shopper</b> Who are cautious and prefer big, well-known brands.</p> <p><b>Smart Shopper</b> 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><b>Ideal Fit</b> 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><b>Risk Factors</b> This assesses potential risks from multiple dimensions for a person to perform the role, e.g., subjecting 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><b>Summary of Fit and Risk</b> 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.	

Capability	Key Function Synopsis	Examples
Access to full chat transcripts	This is to provide a chatbot admin the knowledge of all chats.	<p style="text-align: center;">X</p> <p>Download Chat Data</p> <p>You can download the chat data in two formats. The CSV format contains chat data in a CLEANED format where side talking is filtered, while the full transcript contains everything.</p> <p>Which content would you like to download? Currently, your data contains 5 chat engagements. If this number is large (e.g., several hundreds), it may take a while to download.</p> <p><input checked="" type="checkbox"/> CSV File  <input checked="" type="checkbox"/> Full Transcript</p> <p>If you wish to also include your test data, please check the box below:</p> <p><input type="checkbox"/> Include Test Data</p> <p style="text-align: right;"><span style="background-color: #28a745; color: white; padding: 5px 10px; border-radius: 5px;">Cancel</span> <span style="background-color: #28a745; color: white; padding: 5px 10px; border-radius: 5px;">Download</span></p>
Access to distilled chat information in downloadable CSV	This is to provide a chatbot admin the "cleaned" user responses for further analyses (e.g., user research)	<p style="text-align: center;">3</p> <p>Enable user activity tracking (Optional)</p> <p><b>Enable Google Analytics Tracking</b></p> <p>It is often useful to link users' chatbot activities with their other web activities, such as page browsing and link clicks. Enter your <b>Web URL</b> below to enable <b>Juji chat status tracking</b> while using Juji widget on your page; or fill out all three fields to enable Google Analytics linkings. <a href="#">Read more...</a></p> <p>Hover on the titles to view more information.</p> <p><b>Web URL</b> <input type="text" value="https://mycompany.com"/></p> <p><b>Domain</b> <input type="text" value="mycompany.com"/></p> <p><b>ID</b> <input type="text" value="UA-123456789-1"/></p> <p><b>Insert Custom Code for Analytics Tracking</b></p> <p>If you use a different tracking service other than Google Analytics, use the following sections to insert your own custom code.</p> <p><b>Track user behavior before a chat:</b> <input checked="" type="checkbox"/> Activate/Deactivate: <input checked="" type="checkbox"/></p> <p><b>insert custom code here</b></p> <p><b>Track user behavior during a chat:</b> <input type="checkbox"/> Activate/Deactivate: <input type="checkbox"/></p> <p><b>insert custom code here</b></p>
Pre-built integration of external tracking software (Google Analytics, Adobe Analytics, FullStory and any tracking tool with JS scripts)	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.	
<b>2.7.2 Real-Time Chatbot Maintenance</b>	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><b>Alvin</b> Where can I learn more about the program?</p> <p><b>Juji</b> By default, I know only Juji's website: juji.io I'm still waiting for my creator to put in the website I'm helping out with. #</p> <p><b>Juji</b> I'll be around for a while for you to ask more questions.</p> <p><b>Alvin</b> Where can I learn more about the program?</p> <p><b>Juji</b> You can ask me questions, or visit our <a href="#">program catalog page</a>.</p> <p style="text-align: center;">4 Deploy</p> <p><b>Update Chatbot Release</b> <span style="color: red;">●</span></p> <p>Your chatbot is updated with new messages or knowledge. Whenever you're ready, publish the changes to your audience.</p> <p style="text-align: right;"><span style="background-color: #28a745; color: white; padding: 5px 10px; border-radius: 5px;">Update</span> <span style="background-color: #28a745; color: white; padding: 5px 10px; border-radius: 5px;">New Release</span></p>
Instant FAQ live update to uninterrupted critical conversations	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.	
One-click, instant update of production deployment	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 style="text-align: center;">4 Deploy</p> <p><b>Update Chatbot Release</b> <span style="color: red;">●</span></p> <p>Your chatbot is updated with new messages or knowledge. Whenever you're ready, publish the changes to your audience.</p> <p style="text-align: right;"><span style="background-color: #28a745; color: white; padding: 5px 10px; border-radius: 5px;">Update</span> <span style="background-color: #28a745; color: white; padding: 5px 10px; border-radius: 5px;">New Release</span></p>

Capability	Key Function 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 </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, 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. (user-question) x (user-question-answer) x Thank you.</p> 
<b>III. Enterprise-Scale Adaptability &amp; Extensibility to Maximize Solution ROI</b>	When an organization adopts a chatbot solution, it is often the case that the organization wishes to build upon the current solution and support new users of the chatbot in the future. Thus it is important to evaluate whether such a solution can be easily and quickly adapted to support new tasks or be extended to support multiple tasks. For example, when an educational institute starts with a chatbot solution to support student recruitment, it may want to extend the chatbot to help prospective students in their application process. Likewise, the educational institute may want to add additional chatbots to help student retention or alumni engagement. To evaluate whether a chatbot option is easily adaptable or extensible, assess the following aspects.	
<b>3.1 Adaptability of Chatbot Solution</b>	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.	<p>Clone a chatbot</p> <p>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> 
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.	
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.	
<b>3.2 Extensibility of Chatbot Solution</b>	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 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.	<p>Connect to off-chat channel: sending SMS in chat</p> <p>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> 

Capability	Key Function 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.	 <p>Label this function call: <code>send an email</code></p> <p>Fill in function arguments:</p> <ul style="list-style-type: none"> <li>Email Address: hello@juji.io   </li> <li>Subject: Juji pricing inquiries   </li> <li>Body: body</li> </ul> <p>Back <span style="background-color: #2e71a1; color: white; padding: 2px 10px;">Add</span></p>								
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.	 <p>ID: 2 Name of this API call: get student case</p> <p>Request Type: GET Request URL: <a href="https://matchps-dev-ed.my.salesforce.com/services/apex...">https://matchps-dev-ed.my.salesforce.com/services/apex...</a>   </p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="background-color: #f2f2f2;">Headers</th> <th style="background-color: #f2f2f2;">Body</th> <th style="background-color: #f2f2f2;">Response Mapping</th> <th style="background-color: #f2f2f2;">Test Response</th> </tr> <tr> <td></td> <td>           Key &amp; Value              AppId  `^(get-user-attribute "ap...")    </td> <td></td> <td></td> </tr> </table> <p>Cancel <span style="background-color: #2e71a1; color: white; padding: 2px 10px;">Update</span></p>	Headers	Body	Response Mapping	Test Response		Key & Value  AppId  `^(get-user-attribute "ap...")   		
Headers	Body	Response Mapping	Test Response							
	Key & Value  AppId  `^(get-user-attribute "ap...")   									
Juji IDE: deep chatbot customization via scripting	Allow a chatbot designer to create his/her own reusable, custom conversational AI resources (e.g., conversation library) and use of external and custom functions.	 <p>wchen-la7631b.eng1.jiji.preview</p> <pre> 1 lns 2 wchen-la7631b.eng1.jiji.preview 3 require 4 [juji.topics.fallback.chatflowv2 as fallback.chatflow] 5 [juji.topics.fallback.exceptionv1 as fallback.exception] 6 [juji.topics.fallback.qav2 as fallback.qa] 7 [juji.topics.fallback.requestv1 as fallback.request] 8 [juji.topics.fallback.socialv2 as fallback.social] 9 [juji.topics.interviewingv4 as interviewing] 10 [juji.concept.basic as concept] 11 [juji.expressions.rep.basic as rep] 12 [wchen-la7631b.eng1.custom as custom] 13 [wchen-la7631b.eng1.faq as faq] 14 15 {question} 16 {question_1} 17 {kind:open-ended} 18 :heading "Chatbot hangs around", </pre>								
Juji API: third-party white-labeling of chatbots with zero-code installation	Allow a chatbot designer/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.	 <p>You go ahead please</p> <p>Chat Bot Got it.</p> <p>Chat Bot How are you feeling today?</p> <p>Chat Bot Good to know.</p> <p>Chat Bot What did you enjoy doing today besides work?</p> <p>You I need a lot of a cookie and a reading books</p> <p>Send Click to Speak</p>								