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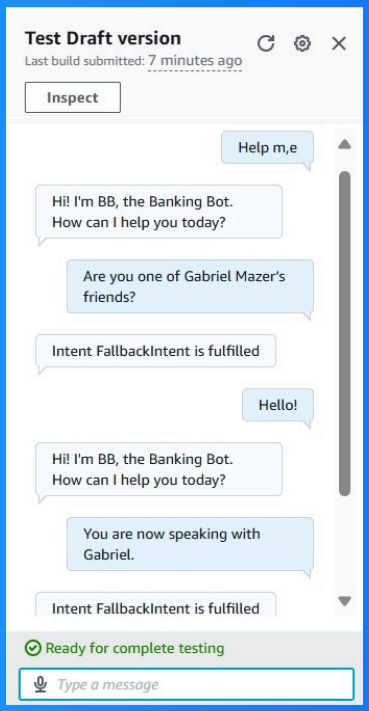
Build a Chatbot with Amazon Lex

Gabriel Taveira Mazer



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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is a service for building chatbots using voice and text. It allows the creation of conversational interfaces that understand natural language, helping automate tasks like customer service, making user interactions more efficient.

How I used Amazon Lex in this project

I used Amazon Lex to build a chatbot that understands user inputs, responds to greetings, and helps with tasks like checking account balances. I set up intents, added FallbackIntent for unrecognized inputs, and included variations for better response

One thing I didn't expect in this project was...

One thing I didn't expect in this project was how flexible Amazon Lex is with handling different user inputs. The ability to customize fallback responses and variations really showed me how easily I can tailor the chatbot to be more personalized.

This project took me...

This project took me around one hour to complete, from setting up the intents to configuring FallbackIntent and testing the chatbot's interactions. The process was efficient and allowed me to quickly implement the features.

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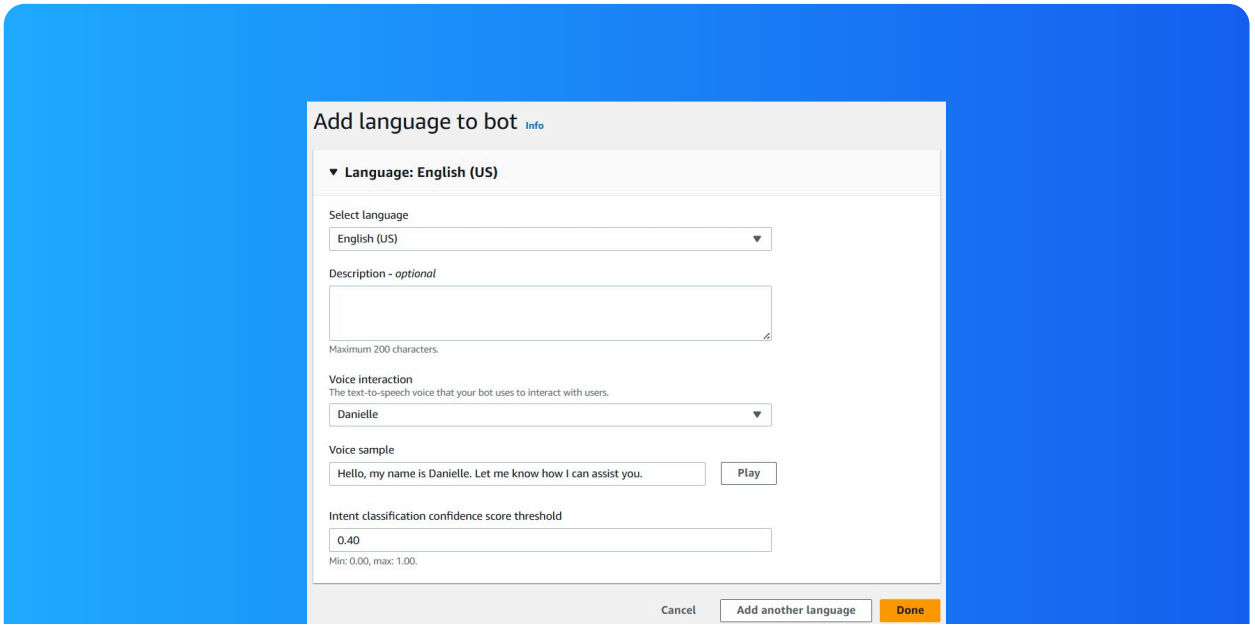
Setting up a Lex chatbot

I created my chatbot from scratch with Amazon Lex. Setting it up took me about 30 min, including configuring the intents, slots, and utterances. The interface made it easy to integrate.

While creating my chatbot, I also created a role with basic permissions because it ensures the chatbot has the necessary access to AWS services, like Lambda or CloudWatch, without over-privileging, maintaining security and proper functionality.

In terms of the intent classification confidence score, I kept the default value of 0.40. This way, Lex will only trigger an intent if it's at least 40% confident that the user's input matches. This ensure better accuracy, avoiding misclassification.



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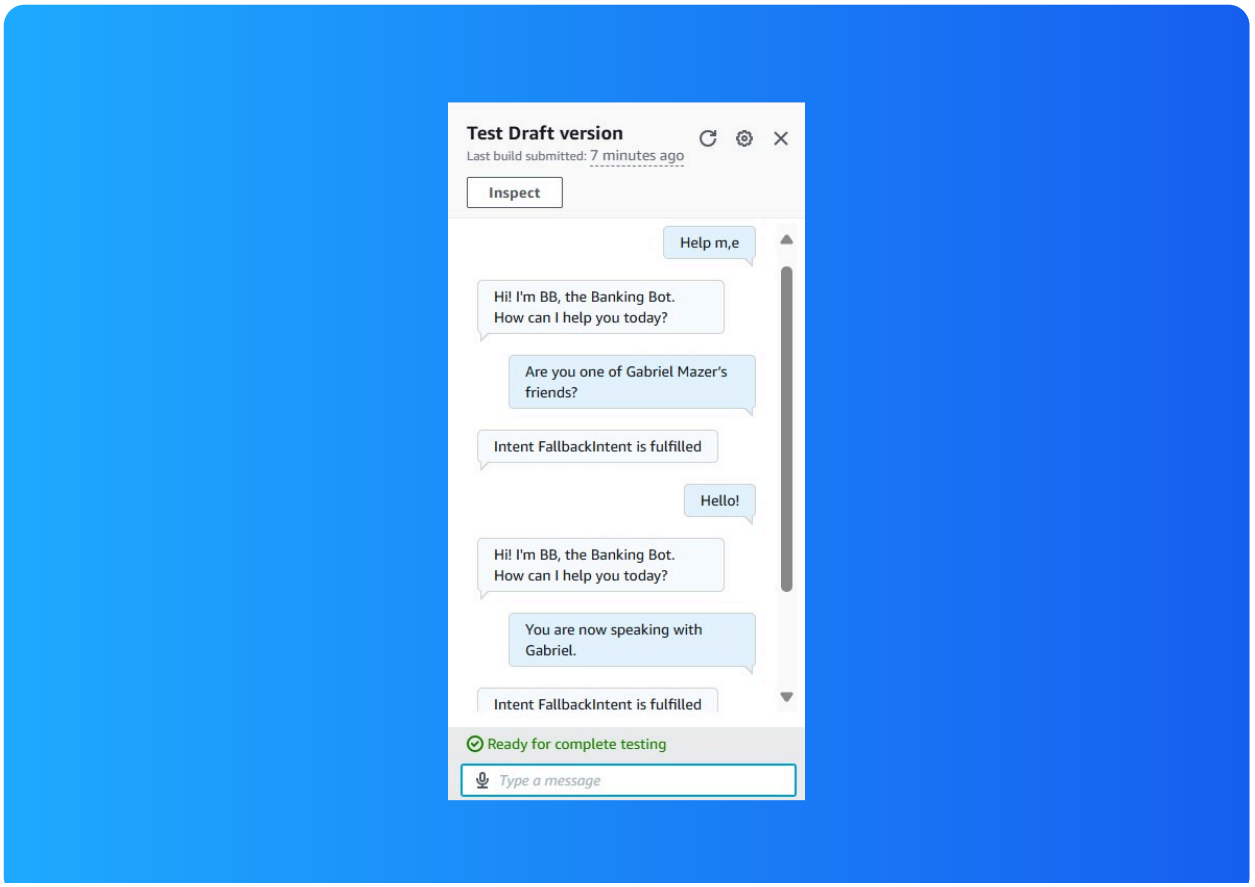
Intents

Intents are predefined actions or tasks that a chatbot recognizes and executes based on user input. In Amazon Lex, intents define the purpose of the user's request, like booking a hotel or checking the weather, guiding the chatbot's responses.

I created my first intent, WelcomeIntent, to greet users when they start interacting with the chatbot. The response is: 'Hi! I'm BB, the Banking Bot. How can I help you today?' This sets a friendly tone and invites the user to engage with the bot.



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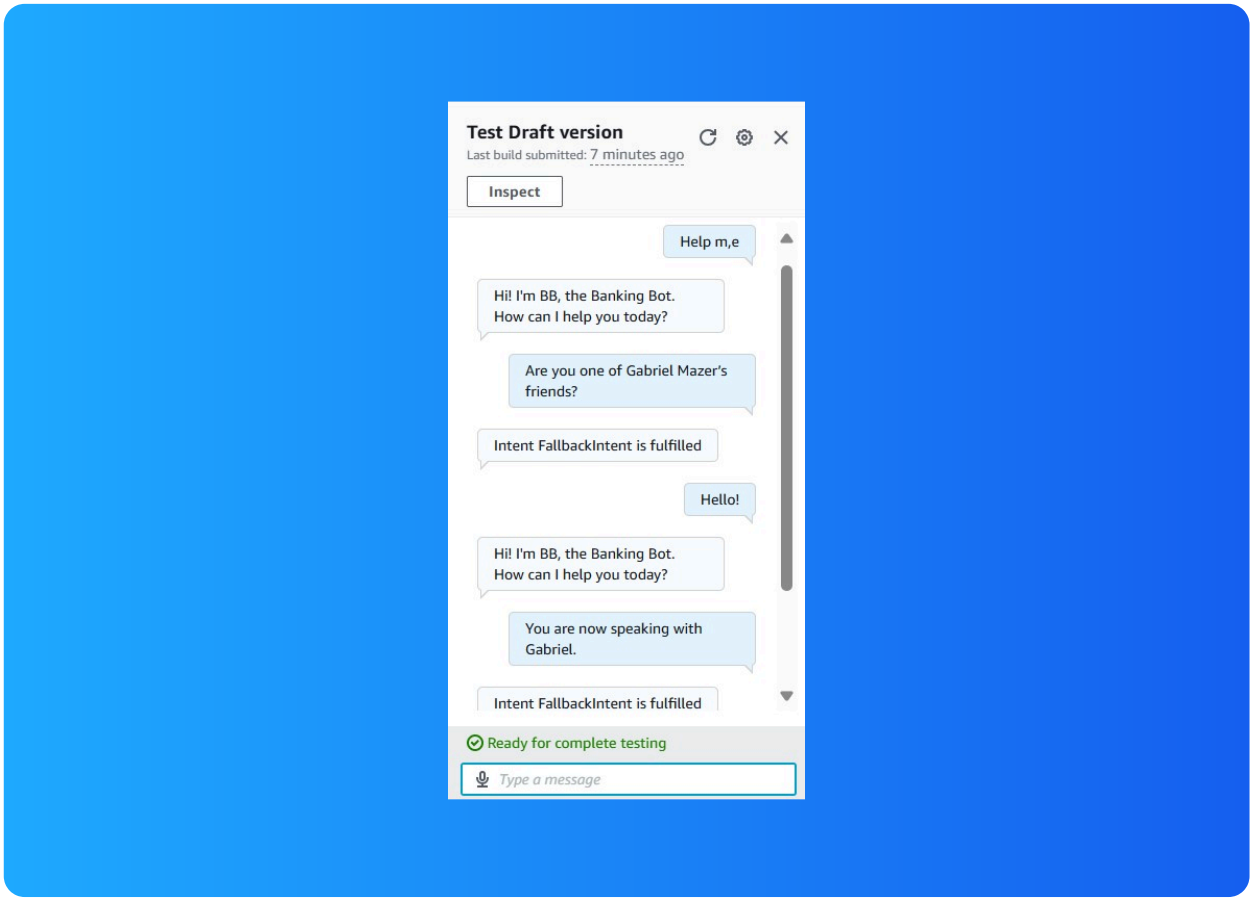
FallbackIntent

I launched and tested my chatbot, which could respond successfully if I enter greetings like 'Hello!' or 'Help m,e.' These phrases trigger the WelcomeIntent, which prompts the chatbot to introduce itself and offer assistance to the user.

My chatbot returned the error message 'Intent FallbackIntent is fulfilled' when I entered 'Are you one of Gabriel Mazer's friends?' and 'You are now speaking with Gabriel.' This occurred because these inputs didn't match any of the predefined intents



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Configuring FallbackIntent

FallbackIntent is a default intent that gets triggered when user input doesn't match any defined intent. I modified it to offer two new options. Now, if the chatbot is unsure, it suggests checking the account balance or making a payment.

I wanted to configure FallbackIntent because it ensures a smoother user experience when the chatbot cannot recognize an input. By offering helpful suggestions the chatbot guides users towards valid actions.

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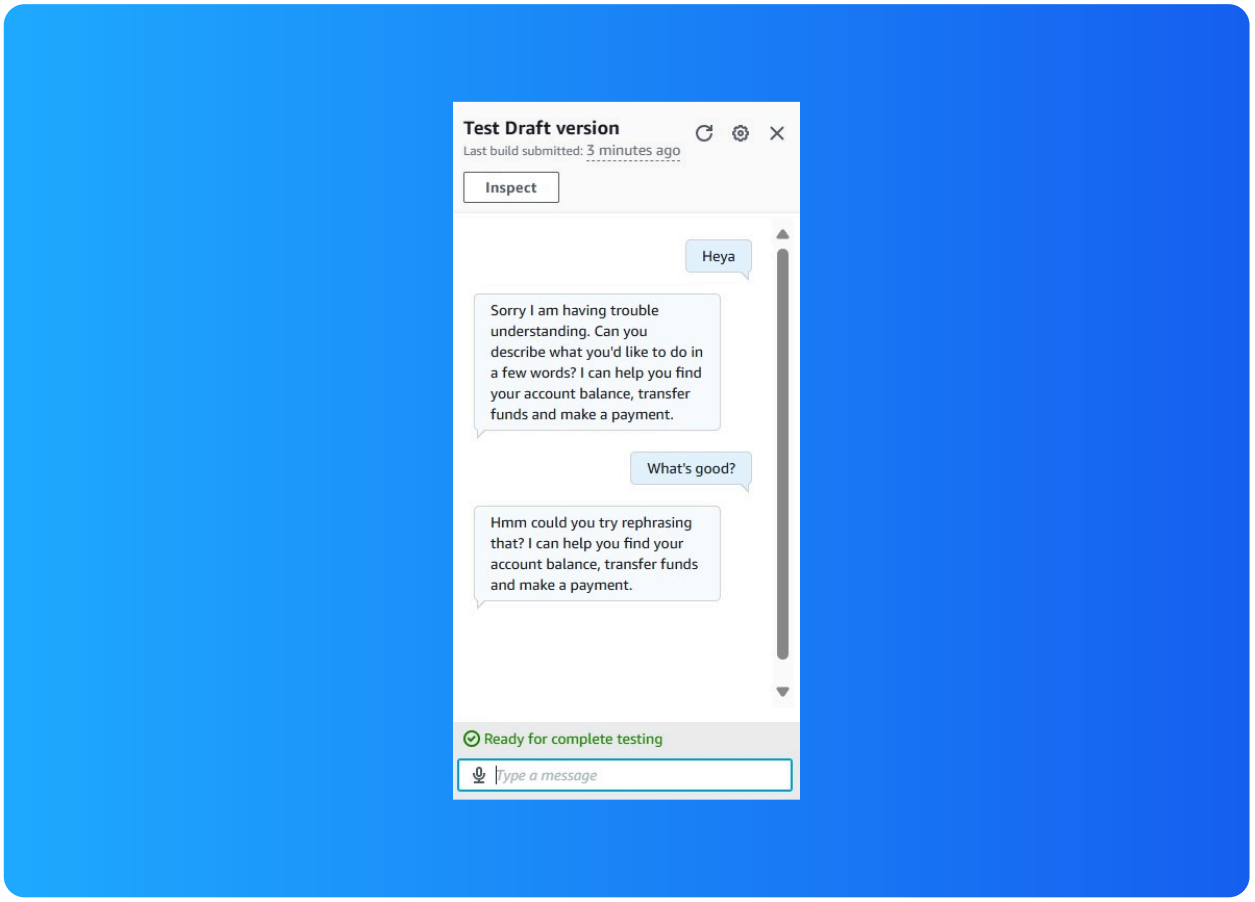
Variations

To configure FallbackIntent, I had to create my own closing response in the intent's set up page "Sorry I am having trouble understanding. Can you describe what you'd like to do in a few words?...".

I also added variations! What this means for an end user is they get to see different forms of my chatbot's closing response.



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