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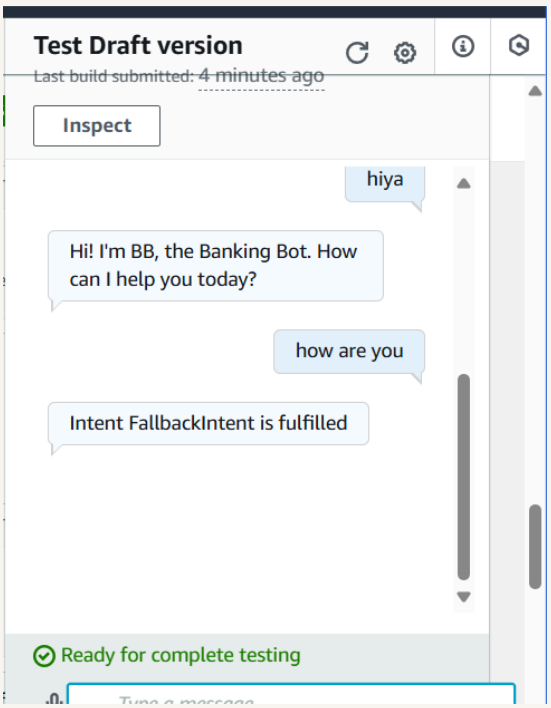
Build a Chatbot with Amazon Lex

Dineshraj Dhanapathy



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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is a service for building conversational interfaces using voice and text. It's useful because it simplifies the creation of chatbots by offering natural language understanding and easy integration with AWS.

How I used Amazon Lex in this project

In today’s project, I used Amazon Lex to create a chatbot that can understand and respond to user inputs through text. I defined intents, added variations, and integrated Lambda functions for dynamic responses.

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

One thing I didn't expect in this project was how much testing and fine-tuning the intents would require. Ensuring the chatbot properly understood varied user inputs took more time than anticipated.

This project took me...

This project took me about 2 hours in total. I spent the hours setting up Amazon Lex, defining intents, and adding variations, while the next hours were focused on testing and refining the chatbot.

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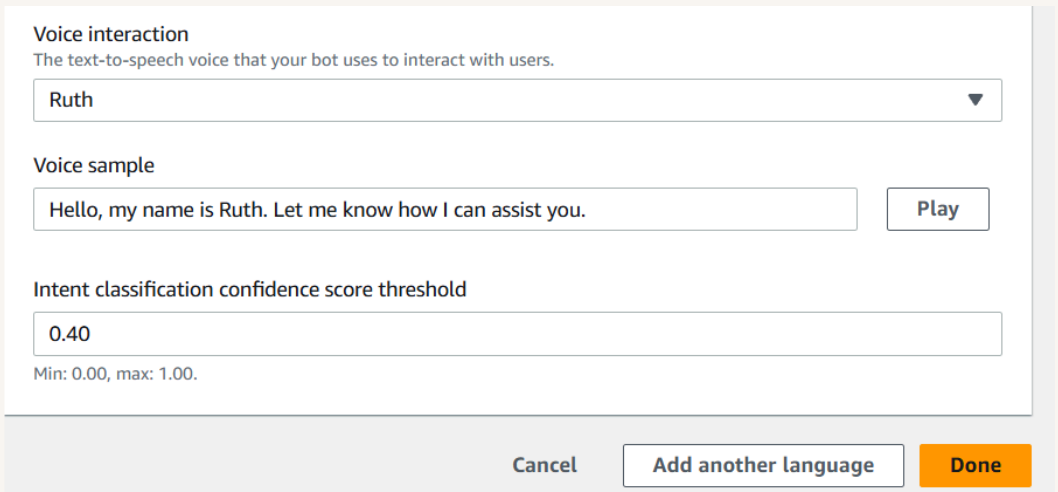
Setting up a Lex chatbot

I created my chatbot from scratch with Amazon Lex. Setting it up took me about 2 hours, including designing intents, building slot types, integrating Lambda functions, and testing the conversational flow.

While creating my chatbot, I also created a role with basic permissions because it allowed Amazon Lex to access necessary AWS services like Lambda for intent fulfillment and CloudWatch for logging.

In terms of the intent classification confidence score, I kept the default value of 0.40. This means Amazon Lex triggers an intent only if its confidence level is 40% or higher, ensuring accuracy.



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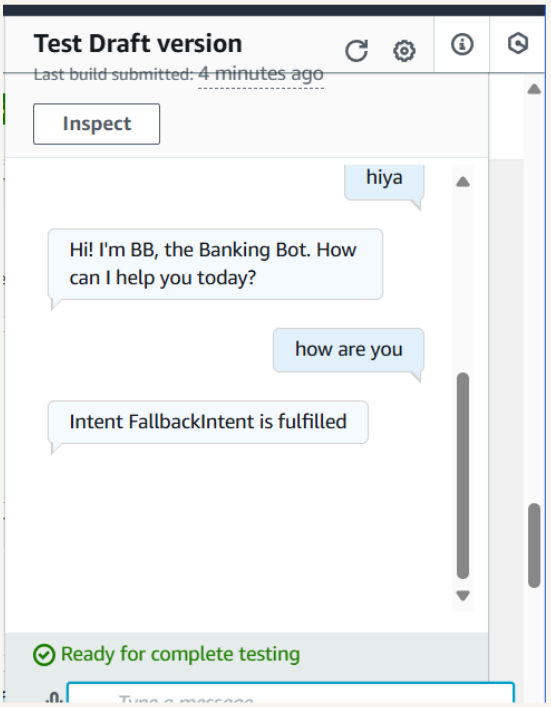
Intents

Intents are the goals or purposes behind a user's input in a chatbot. They represent actions the user wants to perform, like booking a flight or checking weather, and guide the bot's responses and logic.

I created my first intent, WelcomeIntent, to greet users when they interact with the chatbot. It ensures a friendly start to the conversation by responding with a warm welcome message or prompt.



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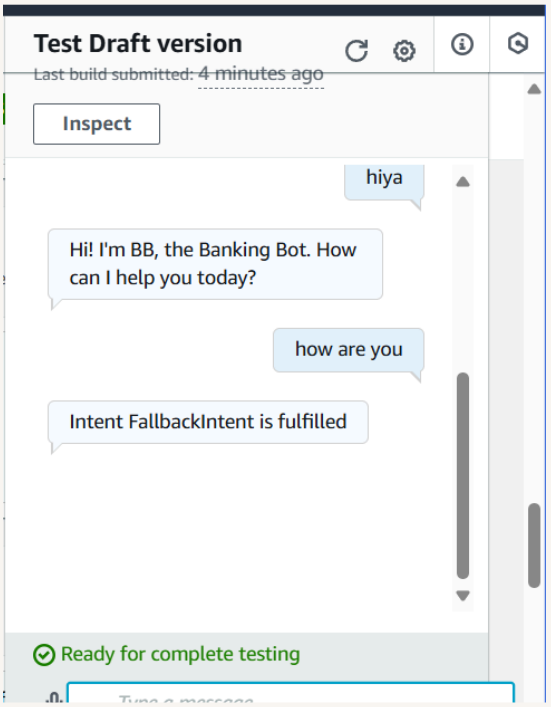
FallbackIntent

I launched and tested my chatbot, which could respond successfully if I enter greetings like "hello," help me," "Hiya," or "how are you," ensuring it recognizes various user inputs.

My chatbot returned the error message 'Intent FallbackIntent is fulfilled' when I entered "How are you" as input. This error message occurred because the input didn't match any defined intents or utterances.



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Configuring FallbackIntent

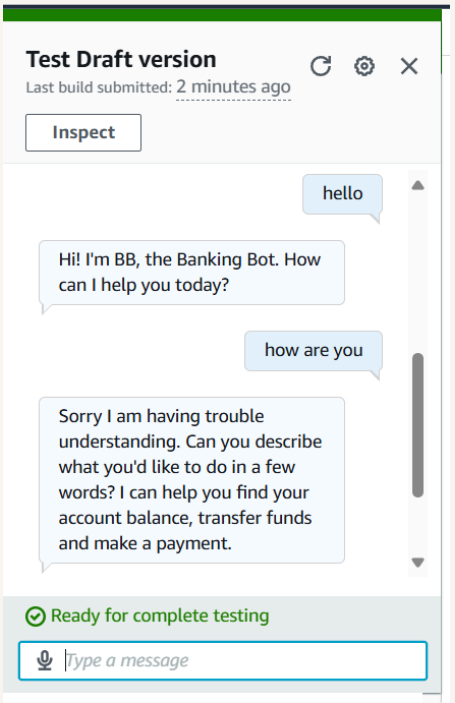
FallbackIntent is a default intent in every chatbot that gets triggered when user input doesn't match any defined intents with sufficient confidence, allowing the bot to handle unexpected inputs gracefully.

I wanted to configure FallbackIntent because it helps handle unrecognized inputs by providing meaningful responses or guidance, improving the chatbot's user experience and making conversations more seamless.

Variations

To configure FallbackIntent, I customized its response messages to guide users back on track, ensuring they receive helpful suggestions or prompts when their input doesn't match any defined intents.

I also added variations! What this means for an end user is they can phrase their inputs in different ways, and the chatbot will still recognize the intent, providing a more flexible and natural conversation.



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