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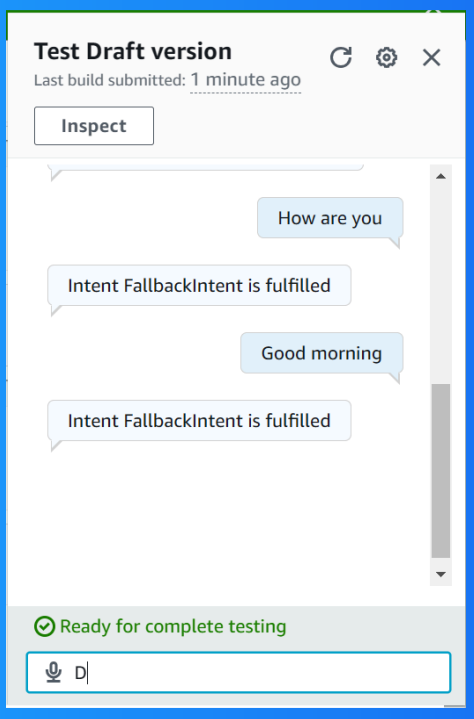
Build a Chatbot with Amazon Lex

Kamlesh Parihar



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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 leverages advanced deep learning technologies for natural language understanding and speech recognition. Lex is useful for creating chatbots and virtual assistant

How I used Amazon Lex in this project

In today's project, I used Amazon Lex to create a chatbot that can interact with users via text. I defined intents, added sample utterances, configured the FallbackIntent, and tested its responses. This allowed me to build an intuitive conversational

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

One thing I didn't expect in this project was the complexity involved in configuring the intents and sample utterances. Balancing a wide range of user inputs while ensuring accurate intent recognition required more thought and testing than I initiall

This project took me...

This project took me about **4-5 hours** to complete. Most of the time was spent defining intents, configuring sample utterances, testing the chatbot's responses, and refining the FallbackIntent. This thorough process ensured a more effective and use

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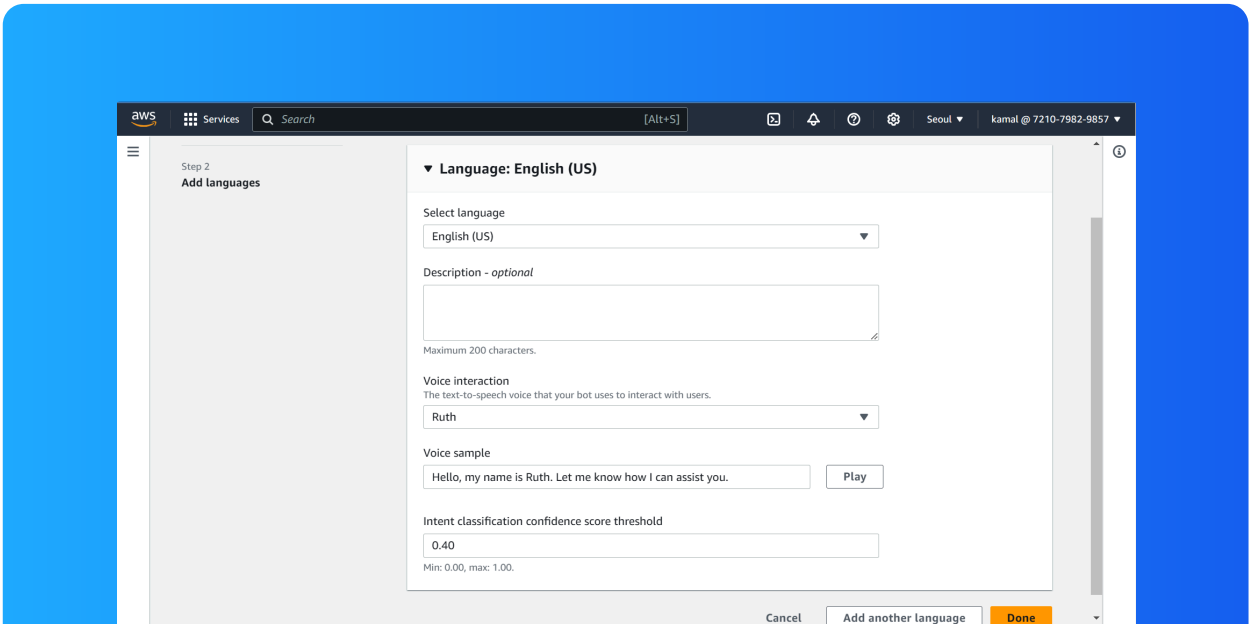
Setting up a Lex chatbot

I created my chatbot from scratch with Amazon Lex. Setting it up took me about 3-4 hours. This included defining intents, creating sample utterances, configuring responses, and testing the bot to ensure it understood user input and functioned smoothl

While creating my chatbot, I also created a role with basic permissions because it ensures that the bot can access the necessary AWS services, such as Lambda for backend processing and CloudWatch for monitoring. This setup allows for smooth functiona

In terms of the intent classification confidence score, I kept the default value of 0.40. This means that if the chatbot's confidence in identifying a user's intent is below this threshold, it will ask for clarification instead of making assumptions,



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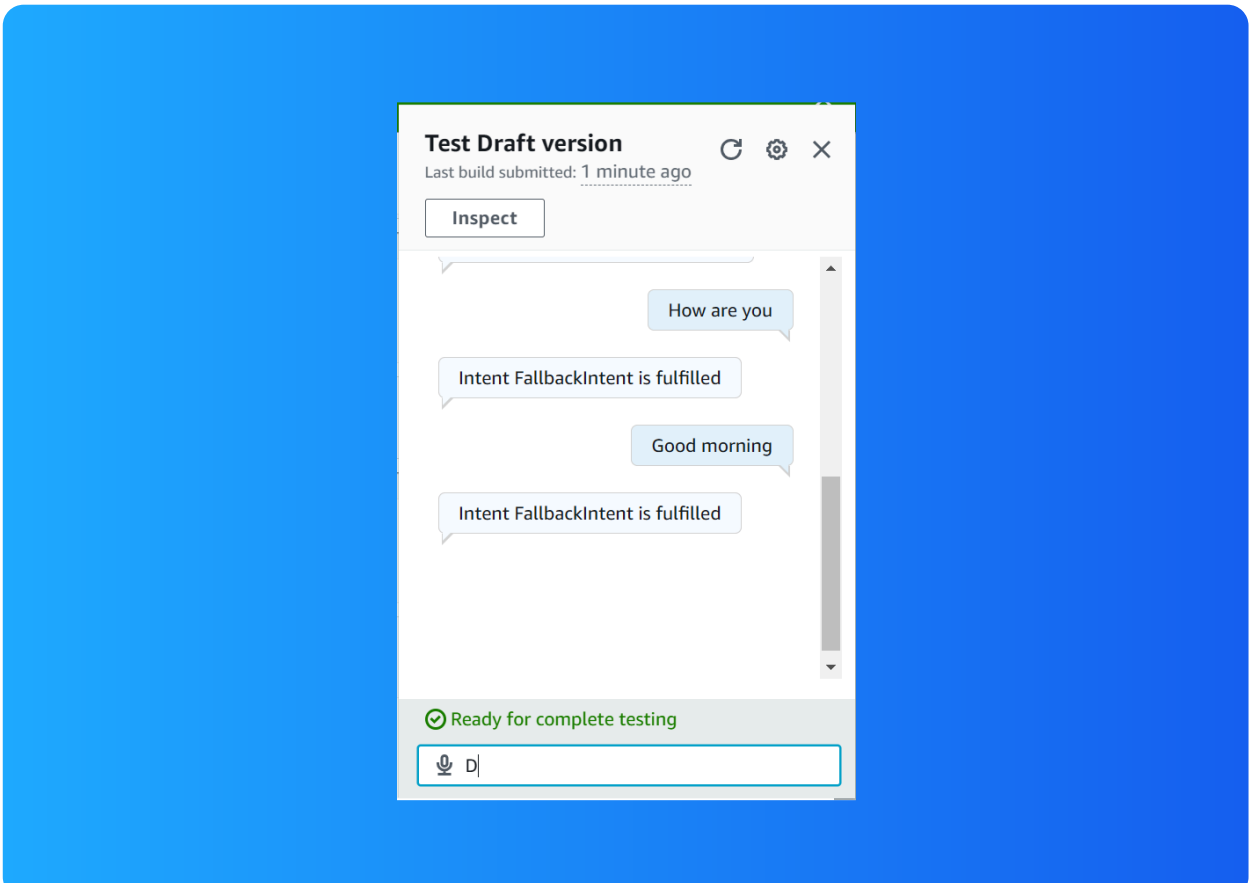
Intents

Intents are the goals or purposes behind a user's input when interacting with a chatbot. In Amazon Lex, intents define what the user wants to achieve, such as booking a flight or checking the weather. Each intent can have associated sample utterances

I created my first intent, WelcomeIntent, to greet users and provide an introduction to the chatbot's capabilities. This intent triggers when users initiate a conversation, allowing the bot to respond with a friendly message and guide them on how to



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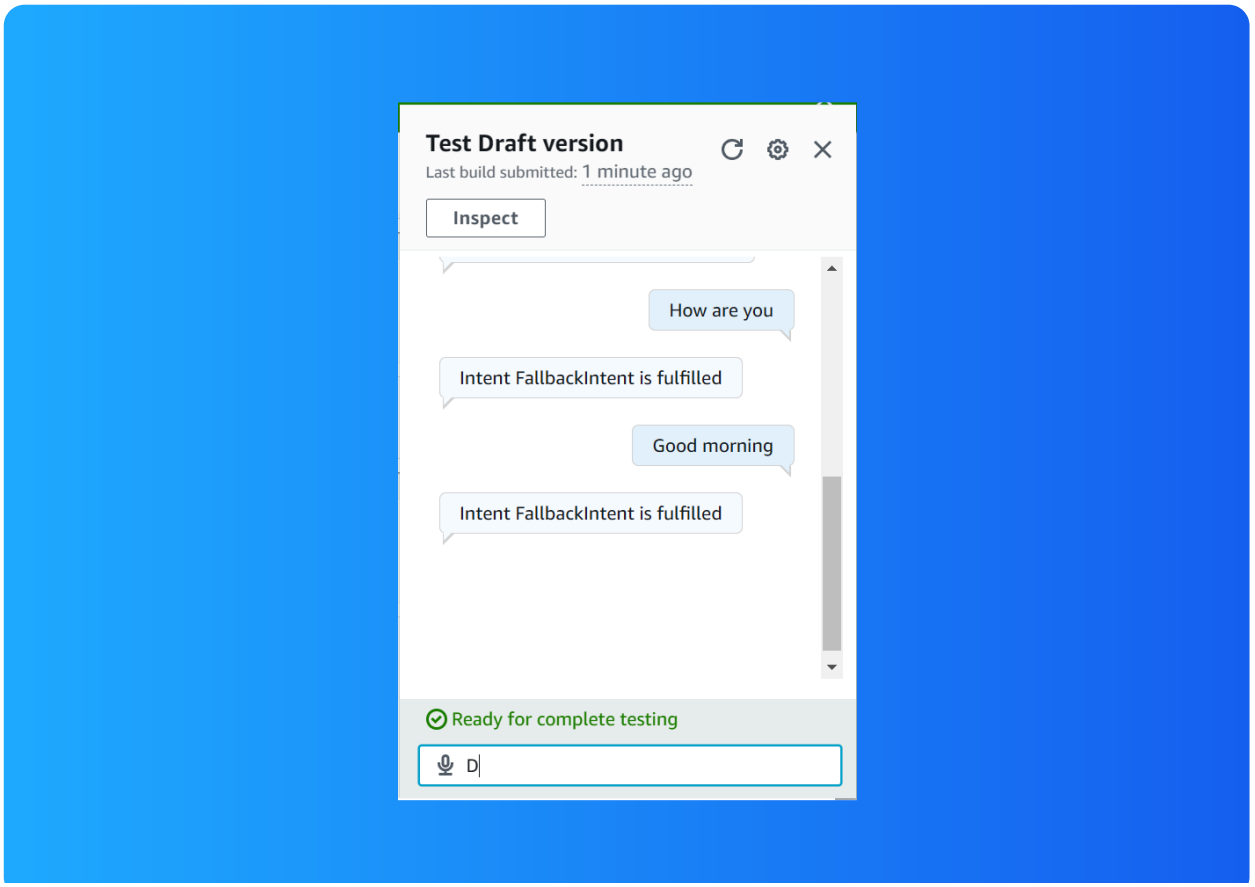
FallbackIntent

I launched and tested my chatbot, which could respond successfully if I entered greetings like "Hello," "Hi there," or "Good morning." Each of these phrases triggered the WelcomeIntent, allowing the bot to provide a friendly response and assist users

My chatbot returned the error message Intent FallbackIntent is fulfilled when I entered phrases it didn't recognize, like "Tell me a joke." This error message occurred because the user input did not match any defined intents, prompting the fallback i



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Configuring FallbackIntent

FallbackIntent is a default intent in every chatbot that gets triggered when the user's input does not match any of the defined intents in the bot. It serves as a catch-all response, allowing the bot to handle unrecognized phrases and guide users bac

I wanted to configure FallbackIntent because it ensures that my chatbot can gracefully handle unrecognized user inputs. By providing a fallback response, I can guide users back on track and encourage them to rephrase their questions or provide more c

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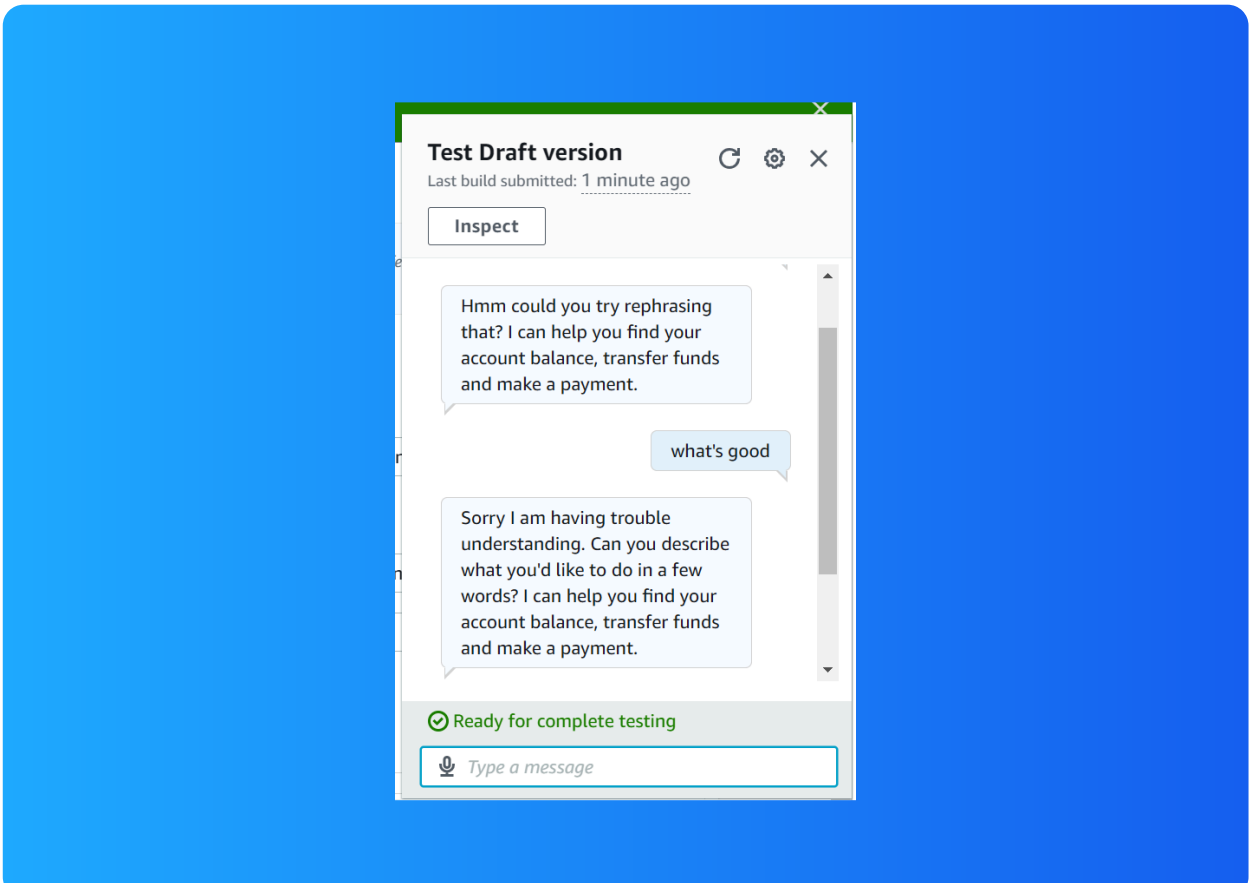
Variations

To configure FallbackIntent, I navigated to the intents section in Amazon Lex and selected the default FallbackIntent. I then defined a response message, such as "I'm sorry, I didn't understand that. Could you please rephrase?" This helps guide users

I also added variations! What this means for an end user is that the chatbot can understand different ways of phrasing the same intent. By including multiple sample utterances for each intent, I ensure that users can interact naturally, improving the



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