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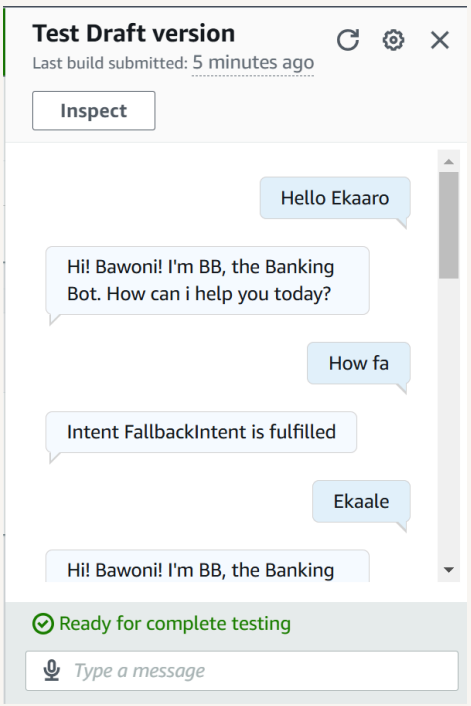
Build a Chatbot with Amazon Lex

Ayodeji Solomon



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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is basically a service that lets you build chatbots, voice assistants. It’s super useful because it handles all the complex stuff like speech recognition and natural language processing, so you can focus on building a great user experience

How I used Amazon Lex in this project

I used Amazon Lex in today’s project to quickly set up and iterate a Bi-lingual chatbot. It helped me handle user inputs, recognize intents, and respond with relevant info—all without having to dive deep into complex code.

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

One thing I didn’t expect was how intuitive Lex’s built-in fallback mechanism caught some edge cases in user input. I assumed I’d need to spend more time fine-tuning it, but it actually handled a lot of the weird phrasing right off the bat.

This project took me...

This project took me about a day to set up and get the basics working. The initial chatbot framework was quick, but I spent extra time refining the responses and adding variations to make sure it felt natural and user-friendly.

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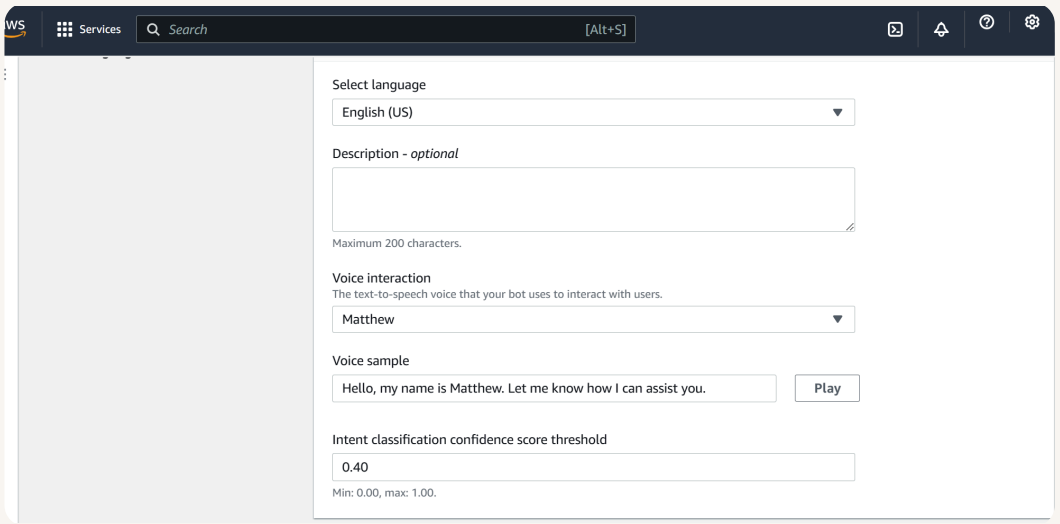
Setting up a Lex chatbot

I created my chatbot from scratch with Amazon Lex. Setting it up took me just 3 minutes, thanks to its intuitive interface and streamlined configuration process.

While creating my chatbot, I also created a role with basic permissions because I wanted to ensure the bot had just enough access to function effectively without compromising security.

In terms of the intent classification confidence score, I kept the default value of 0.40. This ensures the bot matches user inputs with at least 40% confidence, balancing valid matches and avoiding false positives, while leaving room for fine-tuning



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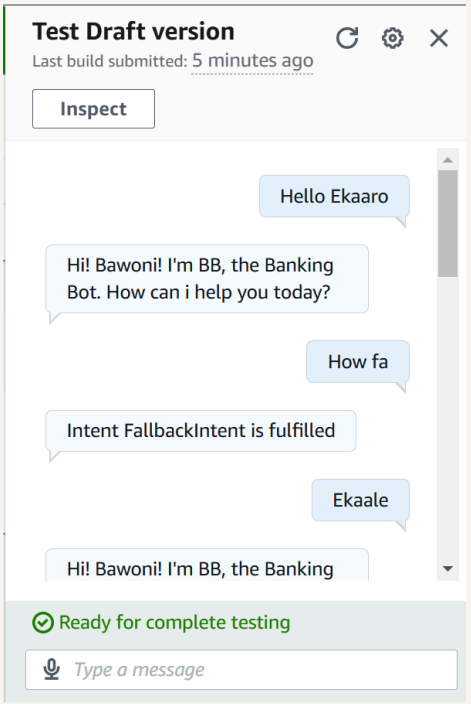
Intents

Intents are the foundation of a chatbot—they define what users want to accomplish through their input. They make it easier for the bot to understand user needs and provide the right response, keeping conversations clear and focused.

I created my first intent, WelcomeIntent, to greet users and set a friendly tone for interactions. It's designed to also make african users feel welcomed and guide them toward the chatbot's key features.



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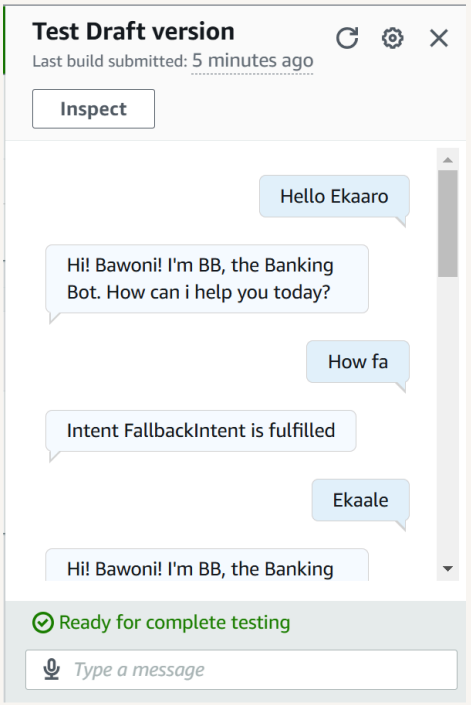
FallbackIntent

I launched and tested my chatbot, which could respond successfully if I enter the following: Hello, Hi, Ekaale, Ekaasan. These comprises of a mix english and african greetings.

My chatbot returned the error message 'Intent FallbackIntent is fulfilled' when I entered an unrecognized phrase. This error message occurred because the input didn't match any defined intents, triggering the FallbackIntent.



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Configuring FallbackIntent

FallbackIntent is a default intent in every chatbot that gets triggered when the bot fails to recognize the user's input based on its predefined intents.

I wanted to configure FallbackIntent because it allows the chatbot to handle unclear input gracefully. It ensures users aren't left without a response, improving the overall experience and guiding them back on track when the bot doesn't understand.

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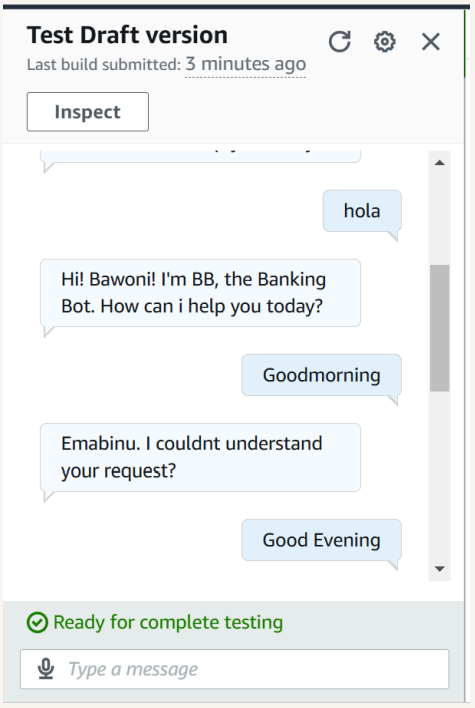
Variations

I configured FallbackIntent by modifying the variables in Amazon Lex console. I set up sample phrases to trigger the intent and defined a response that gently notifies users the bot didn't understand, encouraging them to rephrase or try again.

I also added variations! What this means for an end user is the chatbot can recognize different ways of expressing the same intent. This flexibility improves accuracy and makes the conversation feel more natural and user-friendly.



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