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Build a Chatbot with Amazon Lex

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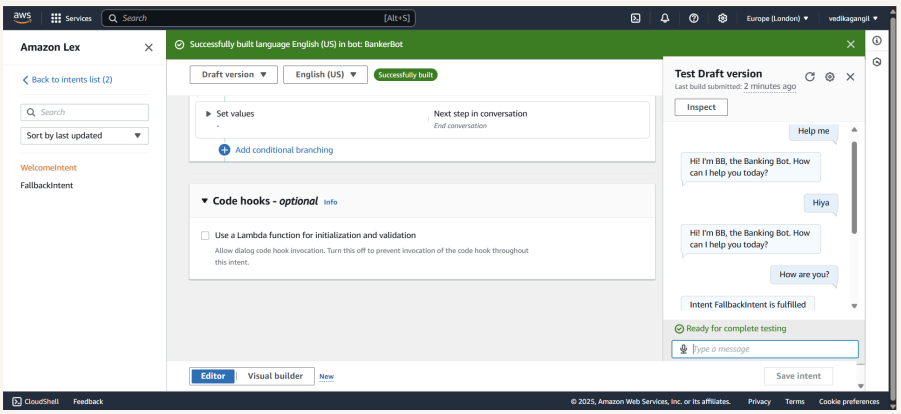

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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is an AWS service for building conversational AI chatbots using voice/text. It leverages the same technology as Alexa, providing pre-built NLP, intent/slot management, and seamless integration with AWS services.

How I used Amazon Lex in this project

Key services/concepts I learned: 1. Amazon Lex (chatbot intents, slots, NLP). 2. FallbackIntent (handling unrecognized inputs).

One thing I didn't expect was...

One thing I didn't expect in this project was how easy the project was to understand and implement.

This project took me...

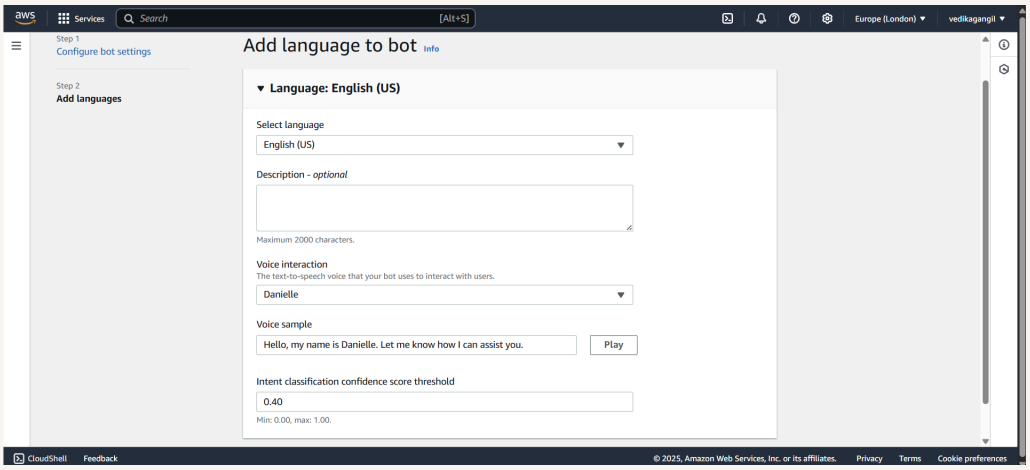
This project took me approximately 30 minutes. The most challenging part was understanding the new concepts that I learnt today. It was most rewarding to see the chatbot working properly.

Setting up a Lex chatbot

I created my chatbot from scratch with Amazon Lex. Setting it up took me under 5 minutes! Everything was so easy to setup and use that someone who is a complete amateur can setup the chatbox in about 15-20 minutes.

I gave my chatbot basic Amazon Lex permissions to enable core functions like text/speech recognition, intent processing, and AWS service integration. These permissions ensure it can operate securely within defined boundaries without access.

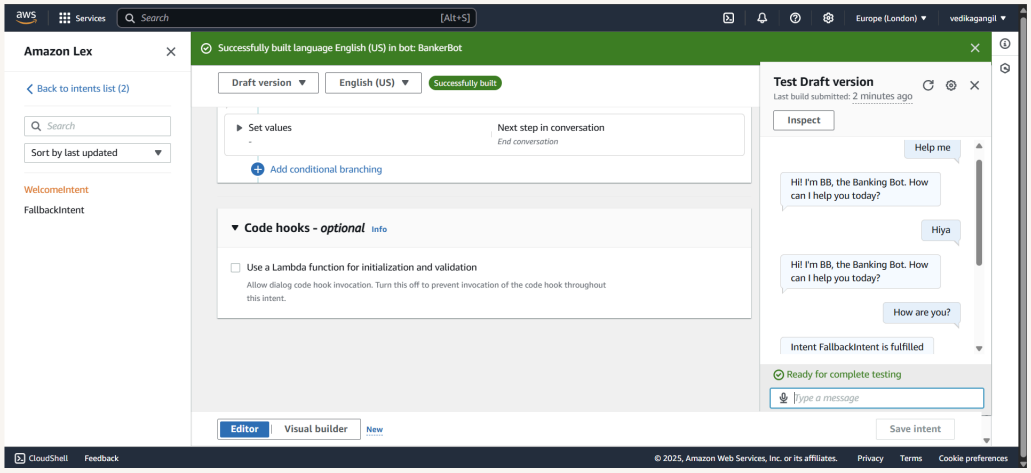
An intent classification confidence score measures how sure Amazon Lex is that a user's input matches a specific intent. Higher scores mean better alignment; low scores may trigger fallback prompts or human escalation. I kept my score at 0.40.


aws
Services
Search
[Alt+S]
Europe (London)
vedikagangil
Step 1
Configure bot settings
Step 2
Add languages
Add language to bot
Info
Language: English (US)
Select language
English (US)
Description - optional
Maximum 2000 characters.
Voice interaction
The text-to-speech voice that your bot uses to interact with users.
Danielle
Voice sample
Hello, my name is Danielle. Let me know how I can assist you.
Play
Intent classification confidence score threshold
0.40
Min: 0.00, max: 1.00.
CloudShell
Feedback
© 2025, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

Intents

An intent is what the user is trying to achieve in their conversation with the chatbot. For example, checking a bank account balance; booking a flight; ordering food. In Amazon Lex, you build your chatbot by defining and categorising different intent

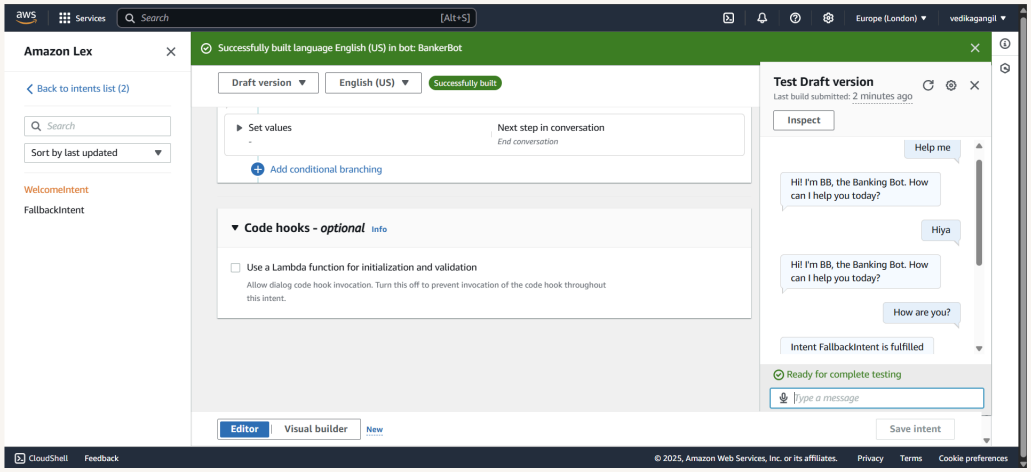
WelcomeIntent handles initial user greetings (e.g., "Hello" or "Hi") and triggers a predefined response like, "Welcome! How can I help you today?" It's the chatbot's first interaction point, setting the tone for the conversation.



FallbackIntent

I launched and tested my chatbot, which could respond successfully if I enter "Hello", "I need help" and "Hiya".

My chatbot returned the error message 'Intent FallbackIntent is fulfilled' when I entered phrases like "Good Morning" or "How are you?". This error message occurred because my input didn't match any defined intents.



Configuring FallbackIntent

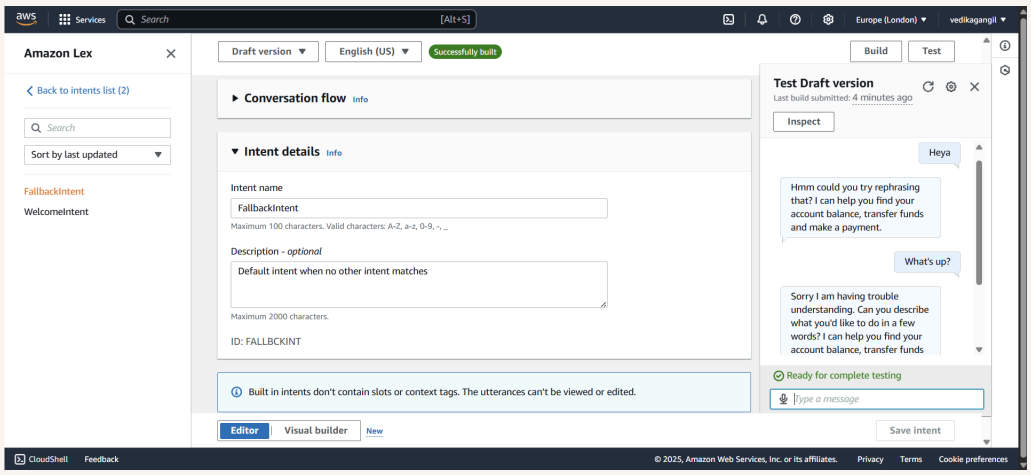
FallbackIntent triggers when user input doesn't match any defined intents (low confidence scores) or contains unclear requests. It provides a default response like, "Sorry, I didn't understand. Can you rephrase?" to keep the conversation flowing.

I configured FallbackIntent to handle unrecognized user inputs gracefully, ensuring the chatbot responds with helpful prompts instead of errors. This improves user experience during misunderstandings or unexpected queries.

Variations

I configured FallbackIntent to handle unrecognized user inputs gracefully, ensuring the chatbot responds with helpful prompts instead of errors. This improves user experience during misunderstandings or unexpected queries.

Variations are alternate phrasings for sample utterances in an intent (e.g., "Hi," "Hello," "Hey there" for a greeting). They help Amazon Lex recognize diverse user inputs while mapping to the same intent.



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