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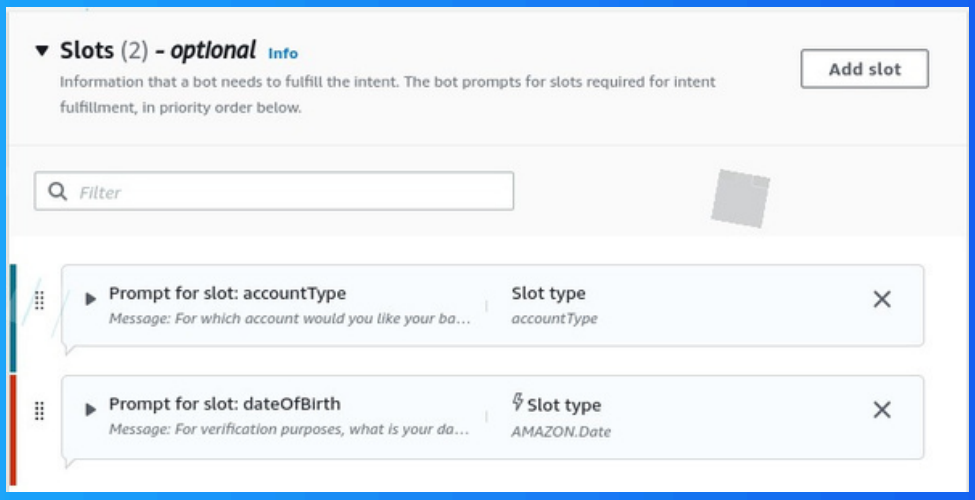
Build a Chatbot with Custom Slots

Hassan Gachoka



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Introducing Today's Project!

I used Amazon Lex to build a chatbot that leverages natural language processing to handle queries. It uses intents, utterances, and slots for dynamic, automated responses to tasks like checking account balances efficiently.

What is Amazon Lex?

Amazon Lex is a service for building conversational interfaces using voice and text. It's useful for creating chatbots and virtual assistants that integrate with AWS services, enabling automated, scalable, and intelligent user interactions.

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

I didn’t expect how intuitive Amazon Lex makes configuring slots and intents. It surprised me how quickly I could implement natural language understanding, streamlining chatbot responses effectively.

This project took me...

This project took me about 40 minutes to complete, including setting up intents, defining custom slot types, and testing the chatbot's responses for accuracy.

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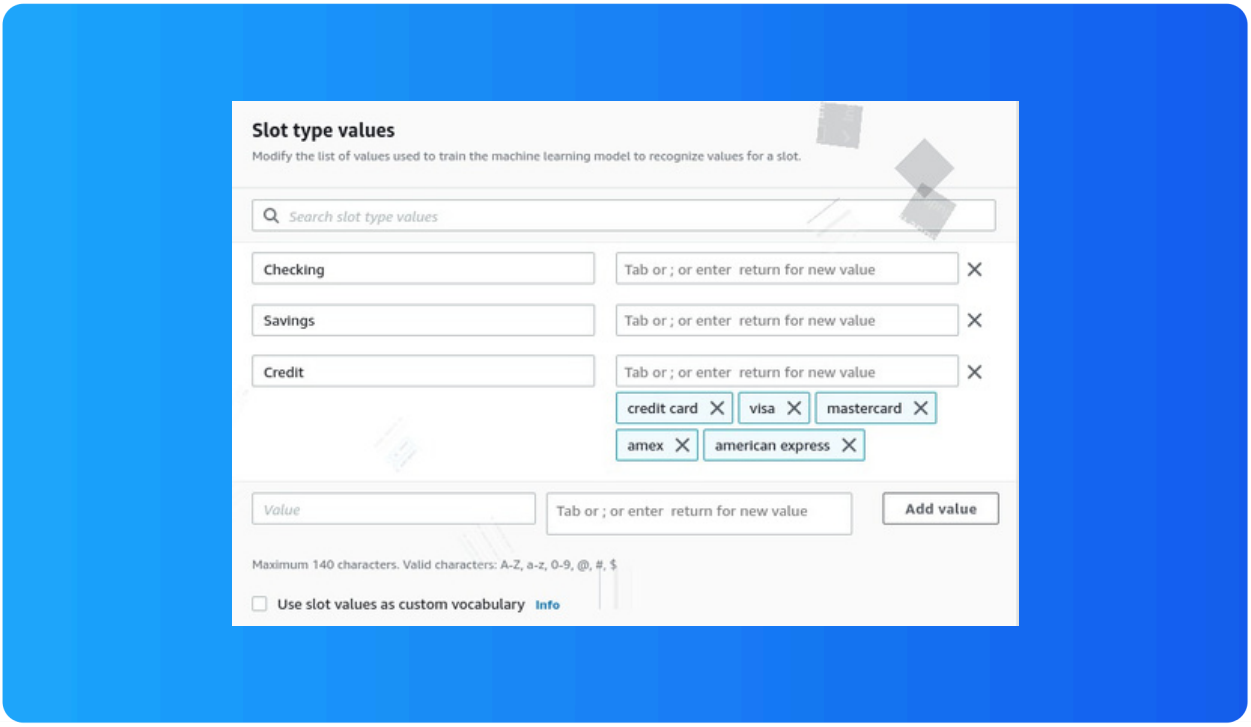
Slots

Slots are placeholders used in conversational AI and dialogue systems to capture specific pieces of information from user input, such as names, dates, or locations, which are required to fulfill a particular intent or action.

By adding custom slots in utterances, my chatbot's users experience more personalized interactions, as it can capture and process specific details like account type, making responses accurate and tailored.

In this project, I created a custom slot type to define specific values or categories that are unique to the applications' context, ensuring more accurate recognition and processing of user inputs tailored to the system's needs.



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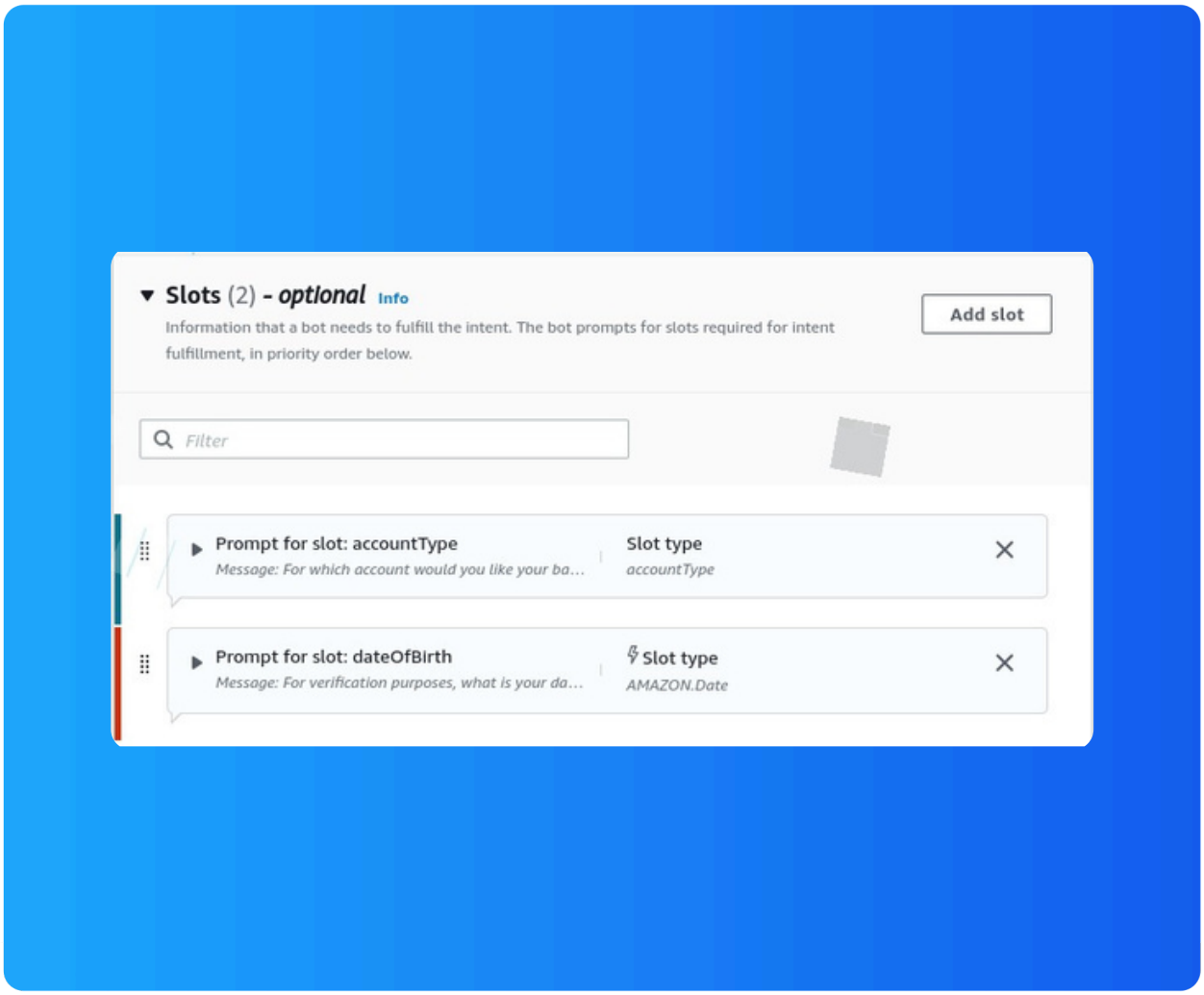
Connecting slots with intents

This slot type has restricted slot values, which means the bot will only accept user inputs that match the predefined values or synonyms specified in the custom slot type, ensuring precise and controlled interactions.

I associated my custom slot with CheckBalance, which is an intent designed to handle user queries related to checking their account balance by identifying relevant input and triggering the appropriate response.



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Slot values in utterances

I included slot values in utterances by embedding slot placeholders in sentences to capture user data. For example, "What is the balance for my {accountType} account?" where {accountType} can be "savings" or "checking."