# Customer support chatbot

Services used

1. **Language service:** The documentation explains the Language Service in Azure, which utilizes Natural Language Processing (NLP) to understand and interpret user input. It outlines the various features of the Language Service, such as language understanding, sentiment analysis and entity recognition.
   the Language Service's custom question answering feature enables one to define and publish a knowledge base of questions and answers with support for natural language querying.
2. **Bot service:** The documentation introduces the Bot services in Azure, which enables the creation, deployment and management of chatbots. It describes the key components of the Bot service, including bot runtime, bot framework SDKs and Azure Bot Channels.
   when combined with Azure Bot Service, one can use a knowledge base to deliver the bot that responds intelligently to user questions over multiple communication channels.

The ability to create conversational AI solutions with these services makes it possible for AI agents to reduce the support workload for human personnel; enabling organizations to provide user support at global scale.

Steps

1. Create a language service resource, with all the default features and custom answering in the custom features.
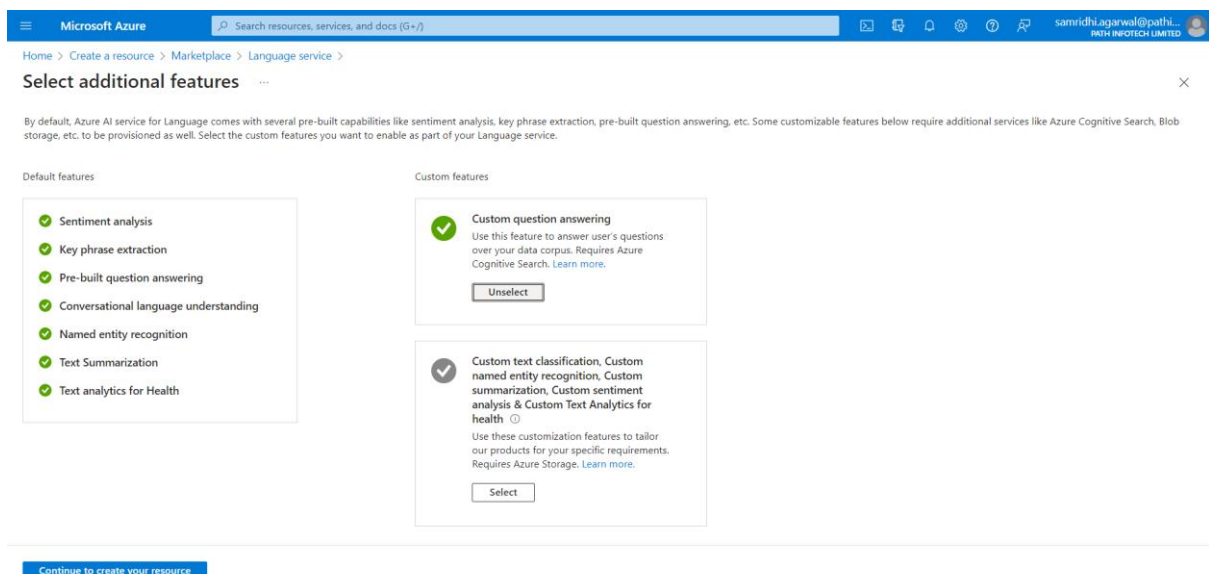
Basics
Subscription: Path Infotech Ltd
Resource group: pathinfo
Region: Central India

Name: intern16
Pricing tier: S (1K calls per minute)
Custom question answering
Azure Search region: Central India
Azure search pricing tier: Basic B (15 indexes)

Check the certification box

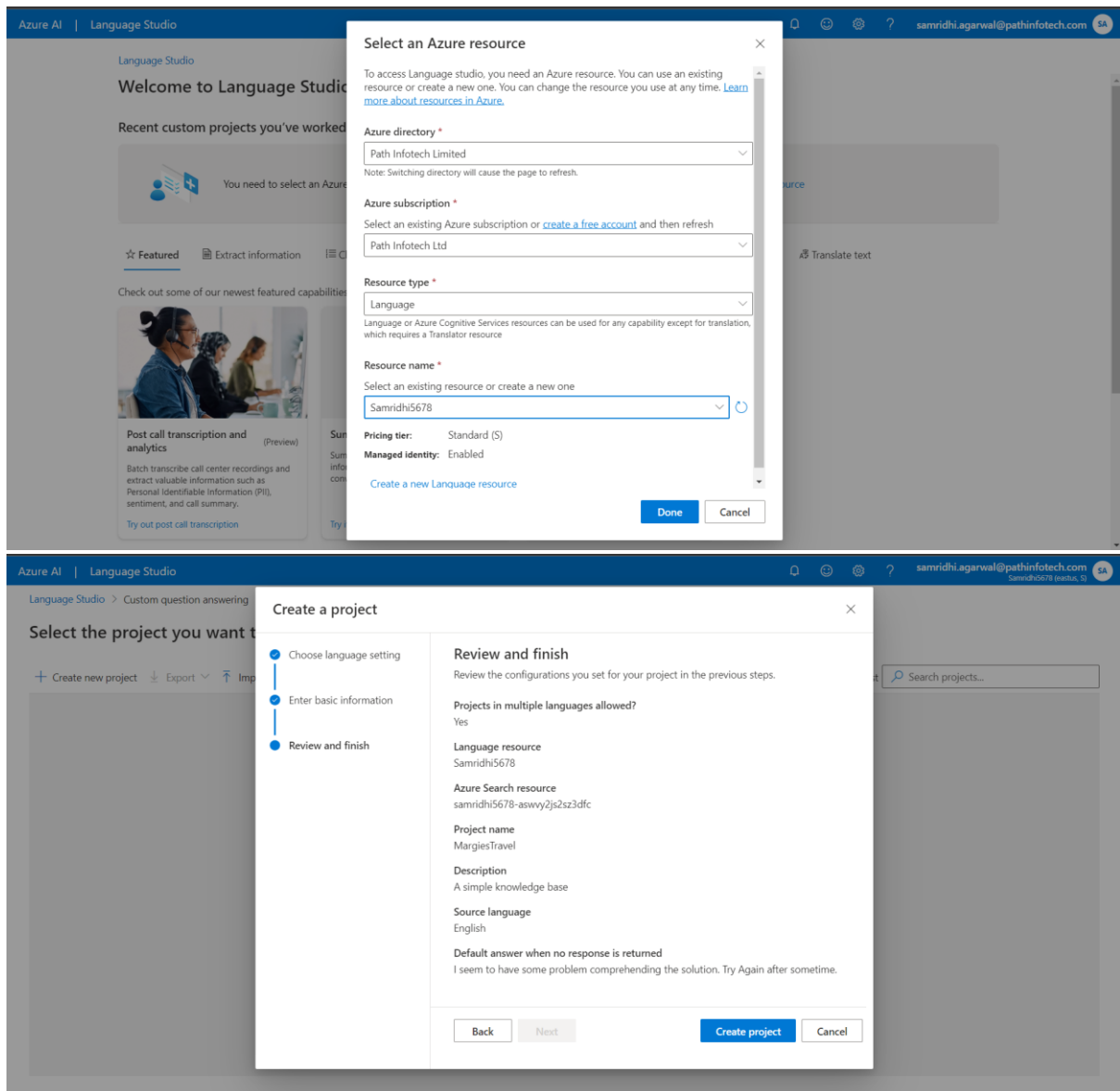Wait for the deployment to complete then go to the deployed Azure OpenAI resource in Azure portal.

2. Open Azure Language Studio and sign in with the subscripted account with the following credentials.

Azure directory: Path Infotech Limited

Azure subscription: Path Infotech Ltd.

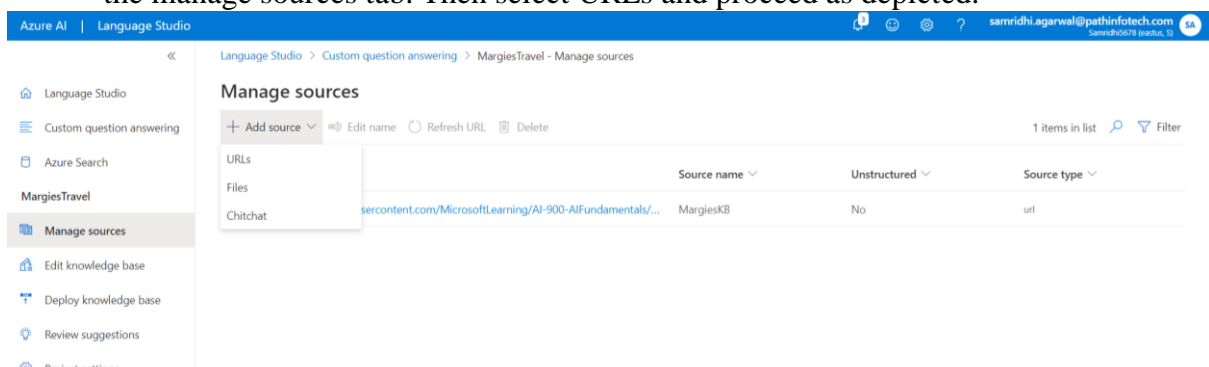**Resource type:** Language

Resource name: Samridhi5678

3. Editing and testing the knowledge base
   Add a basic knowledge base from
   https://raw.githubusercontent.com/MicrosoftLearning/AI-
   900AIFundamentals/main/data/qna/margies_faq.docx by clicking on "Add source" on
   the manage sources tab. Then select URLs and proceed as depicted.

Add URLs

You can add up to 10 URLs at a time. Question and answer pairs are extracted from each URL by default.

+ Add url   Edit   Delete

URL name ↓ ∨	URL ∨	Classify file structure ∨
⃝ MargiesKB	https://raw.githubusercontent.com/...	Auto-detect ∨

Add all   Cancel

Once the knowledge base is added, select "Edit knowledge base" from the left pane and add question answer pairs.

Add a new question answer pair

Add a new question answer pair by entering a question, answer, and selecting the source.

Source *
Editorial

Question *
What is your role?

Answer *
I am a front-end developer.

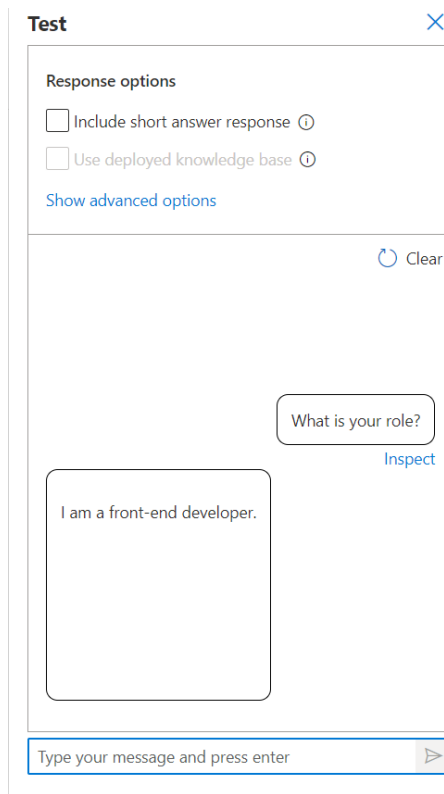Add metadata (optional)

+ Metadata

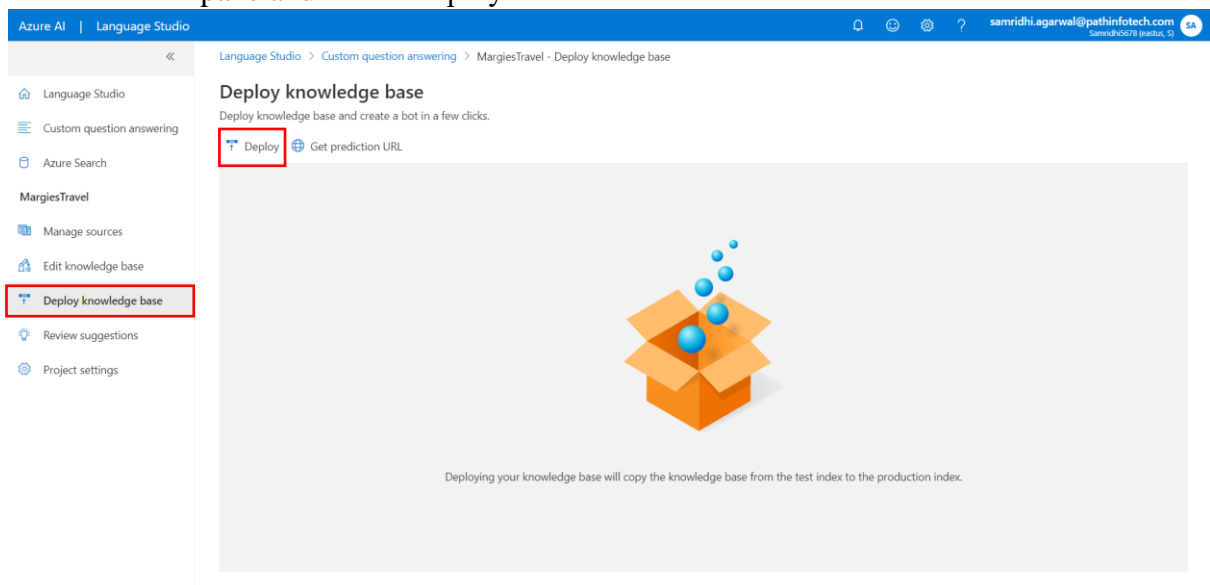Add follow up prompts (optional)

+ Follow up prompt

Done   Cancel

Upon testing, the chatbot prompts us with the same reply as we have entered in the question-answer pair. Thus, testing successful.

4. Creating a chatbot for the knowledge check created above.
   To make the knowledge base available to a bot, one must publish it as a service that can be accessed over HTTP. This is done using Azure Bot Services to create and host a bot that uses this knowledge base to answer the questions.

   To deploy the knowledge base, select "Deploy Knowledge Base" from the left pane and click "Deploy".

Wait for the knowledge base to be deployed. Then create a bot.

Creating the bot opens Azure portal to create a Web App bot.

5. Create the Web App bot with the following credentials:
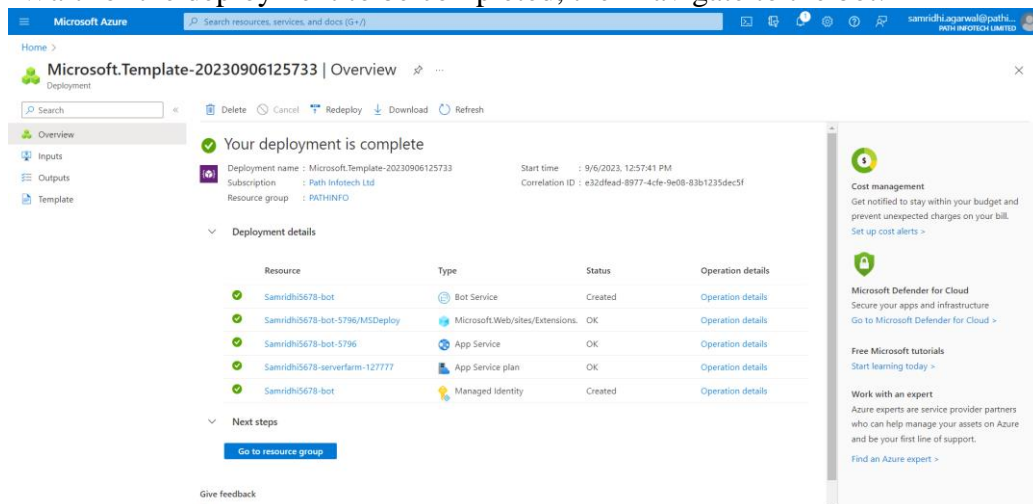   **Subscription:** Path Infotech Ltd
   Resource group: PATHINFO
   Resource group location: East US
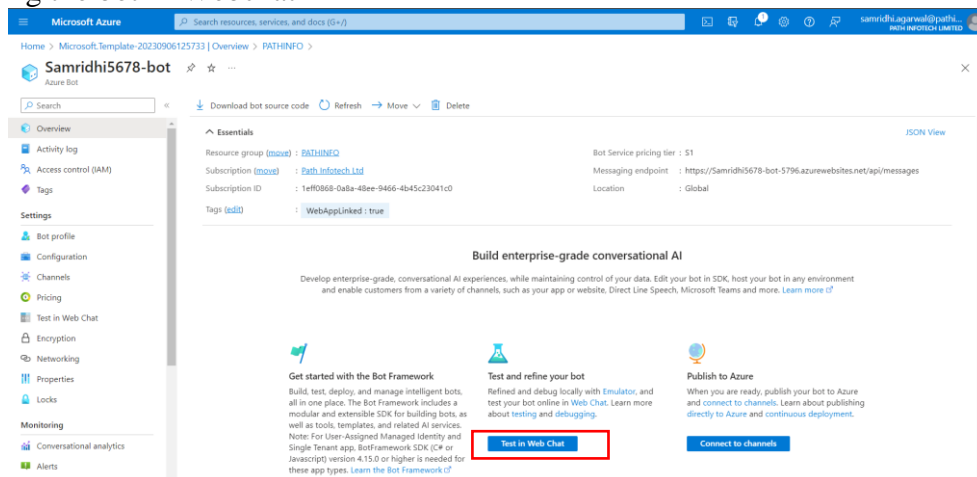   **Bot handle:** Samridhi5678-bot
   Creation type: create new user-assigned managed identity
   Wait for the deployment to be completed, then navigate to the bot.

6. Testing the bot in Webchat
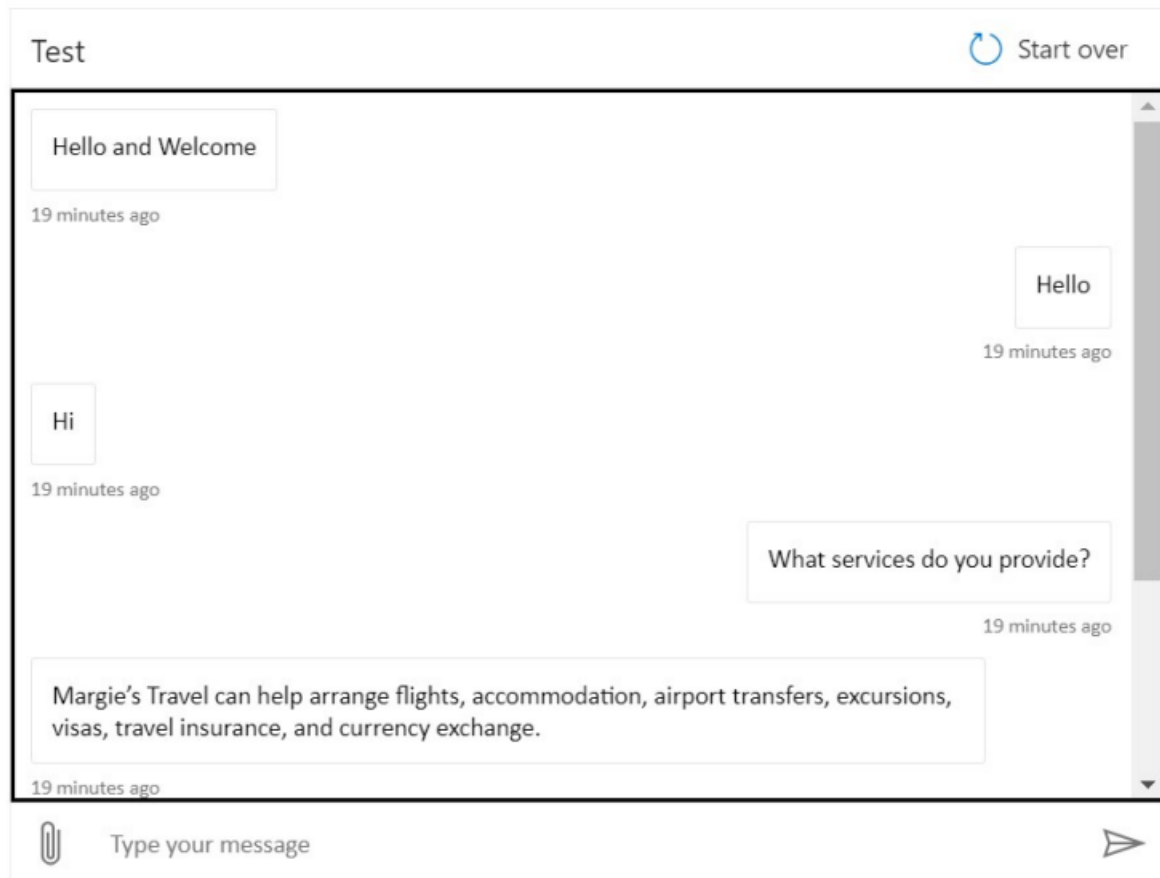
SUMMARY

The documentation provides a comprehensive guide on building conversational chatbots using Azure Language Services and Bot Service, covering the setup process in Azure portal, integrating NLP understanding with Language Service, designing effective conversations, testing, debugging, deploying and management of chatbot.

REFERENCES

https://www.youtube.com/watch?v=X_aS-37IOq0&t=1611s&ab_channel=MicrosoftReactor