AI Based Complete Health Management and Assistant Solution

Introduction

Access to timely medical assistance is often a challenge, particularly in emergencies where patients are unable to visit a hospital immediately. Traditional healthcare systems are burdened with long waiting times, high consultation costs, and a shortage of available doctors. To address these challenges, we propose an **AI-powered healthcare chatbot** that enables users to enter their symptoms and receive instant medical guidance, pharmaceutical recommendations, and self-triage assistance.

Plan & Functionality

The chatbot leverages advanced **Artificial Intelligence (AI)** and **Natural Language Processing (NLP)** to analyze user symptoms and provide medically-informed responses. Users can input their symptoms in natural language, and the AI will assess the severity, offering potential treatment options or directing them to nearby healthcare facilities. The system ensures users receive **accurate and timely medical advice**, even when physical hospital visits are not possible.

Benefits of the AI Chatbot

1. **Reduced Waiting Times:** Patients no longer need to wait for doctor appointments or emergency room consultations. The chatbot provides immediate responses, helping users make informed health decisions quickly.

2. **Instant Pharmaceutical Recommendations:** Based on symptom analysis, the chatbot suggests over-the-counter or prescribed medications that can alleviate illnesses efficiently. This ensures users get the right treatment without unnecessary delays.

3. **Lower Consultation Costs:** By minimizing hospital visits for minor ailments, users can **save on consultation fees** while still receiving expert medical guidance.
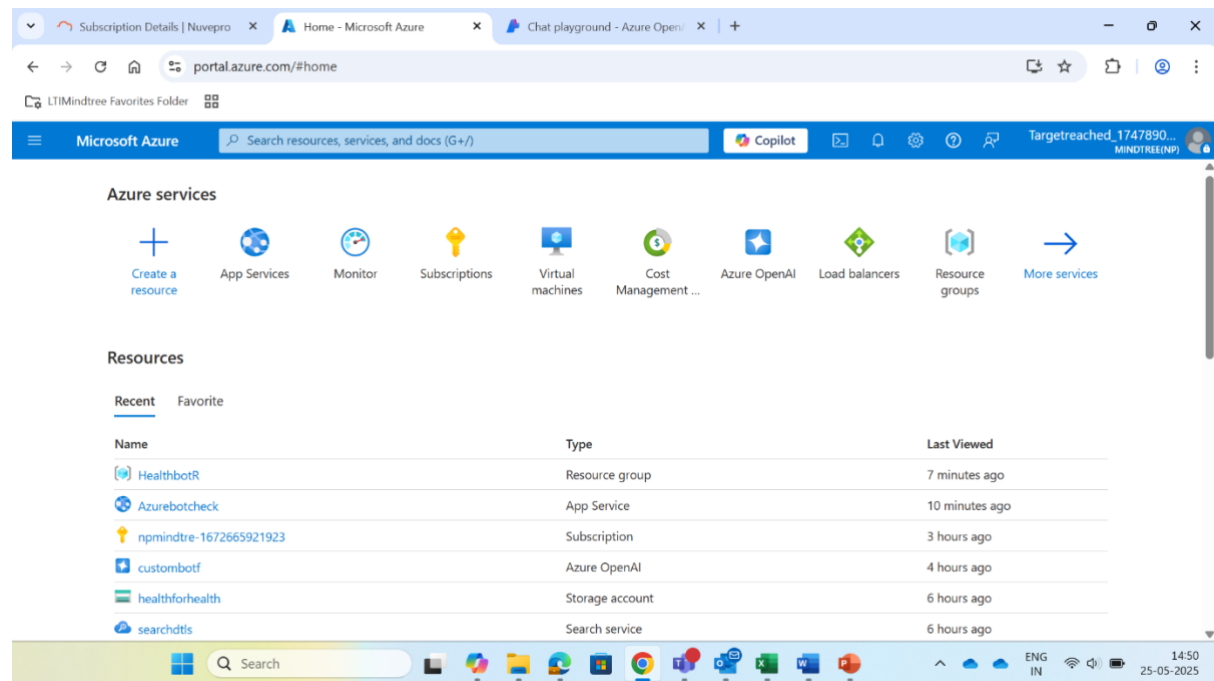
Expected Impact

The AI-powered chatbot will streamline healthcare accessibility and **reduce dependency on in-person consultations**, allowing doctors to focus on critical patients while **empowering individuals to manage their health effectively**. As AI technology
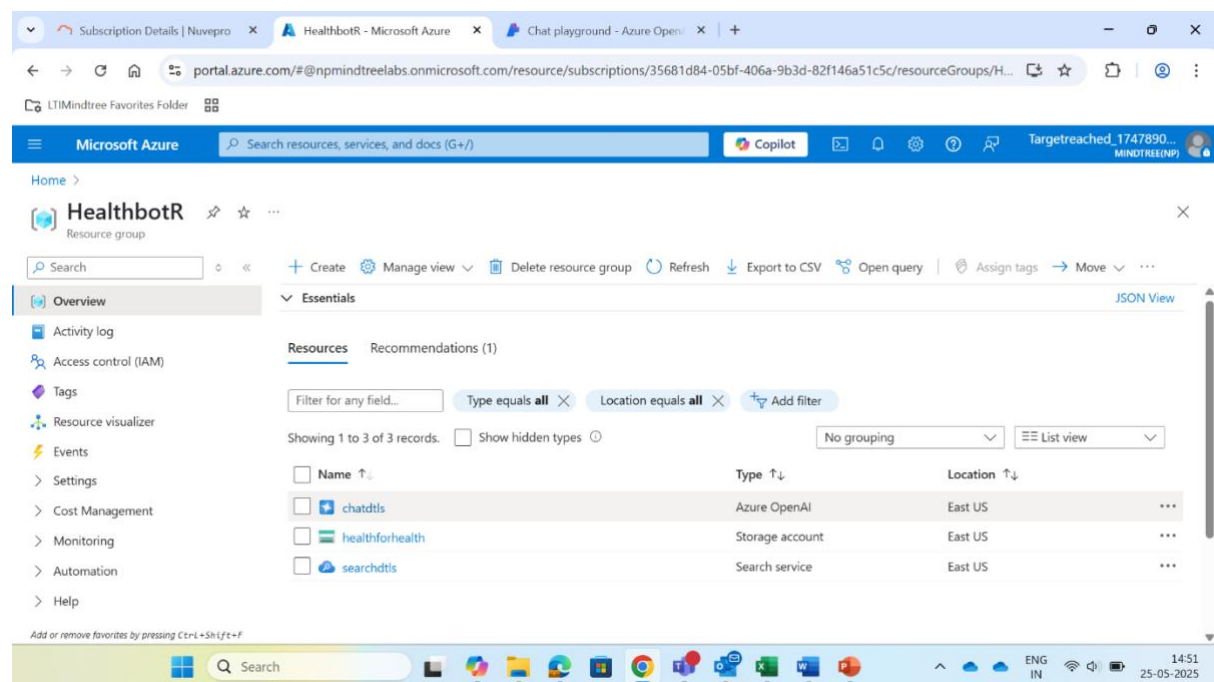
evolves, the chatbot can integrate with **electronic health records, hospital databases, and pharmacies** for enhanced personalized care.

Here are the steps you can follow to use the services
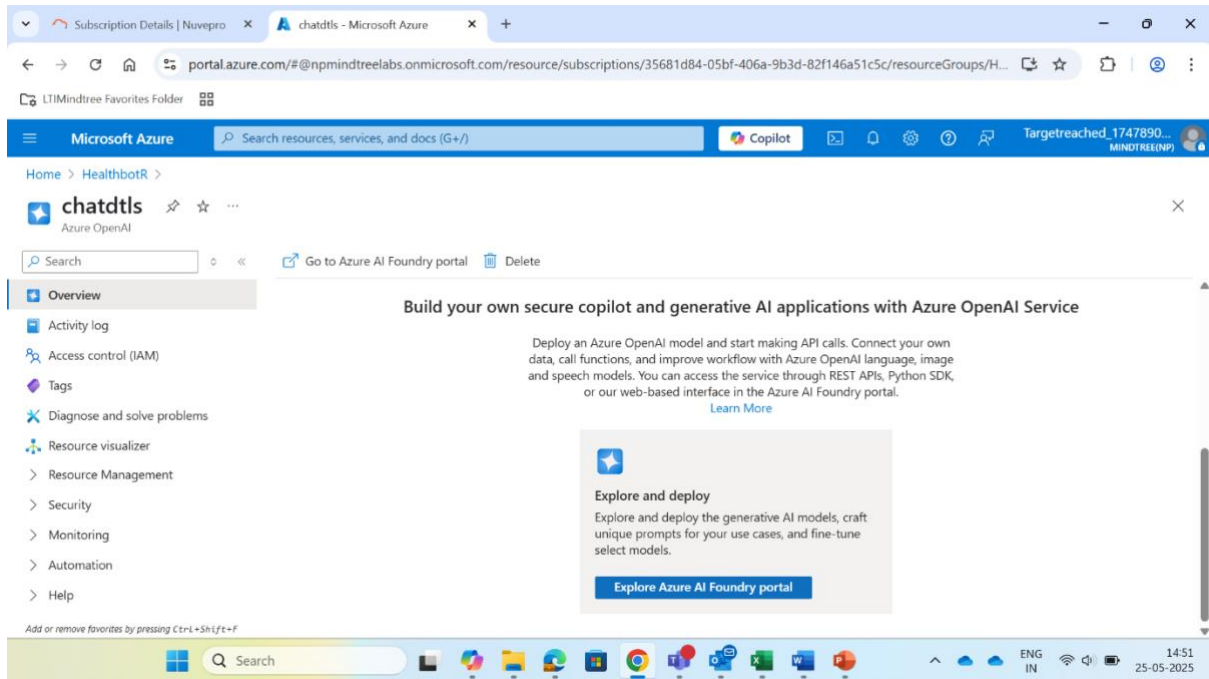
- We have created a resource group HealthbotR. Click on it.
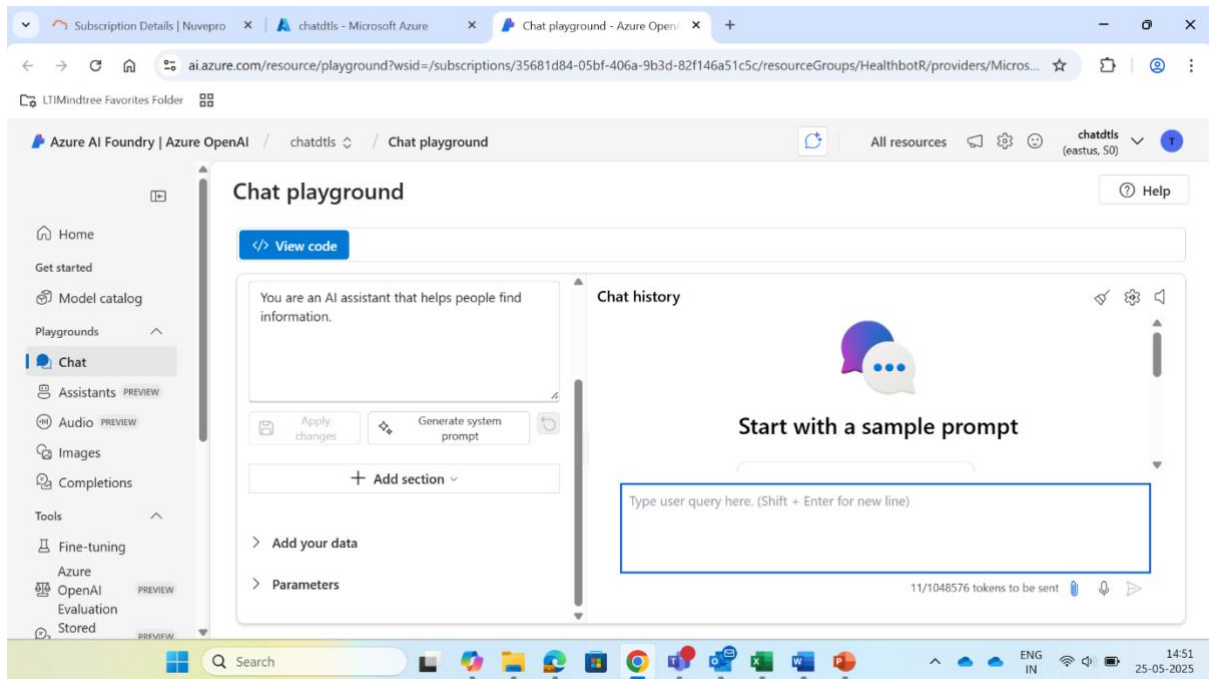

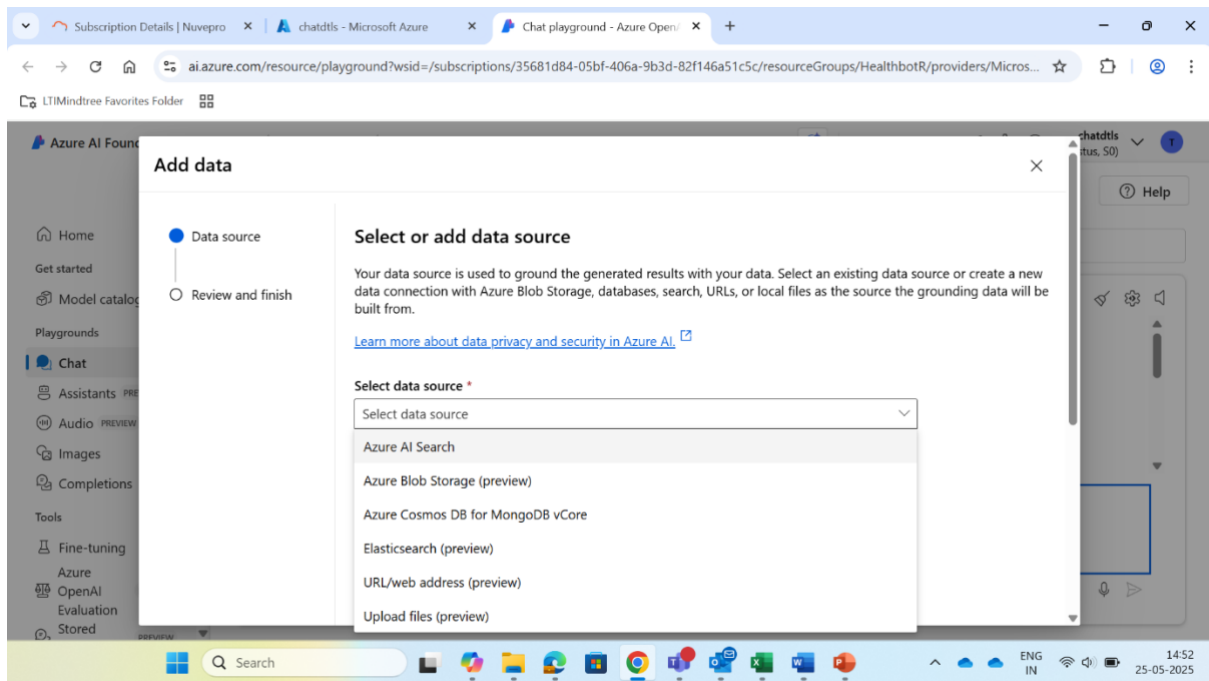- Now you will see this screen. Click on the chatdtls AzureOpenAI.

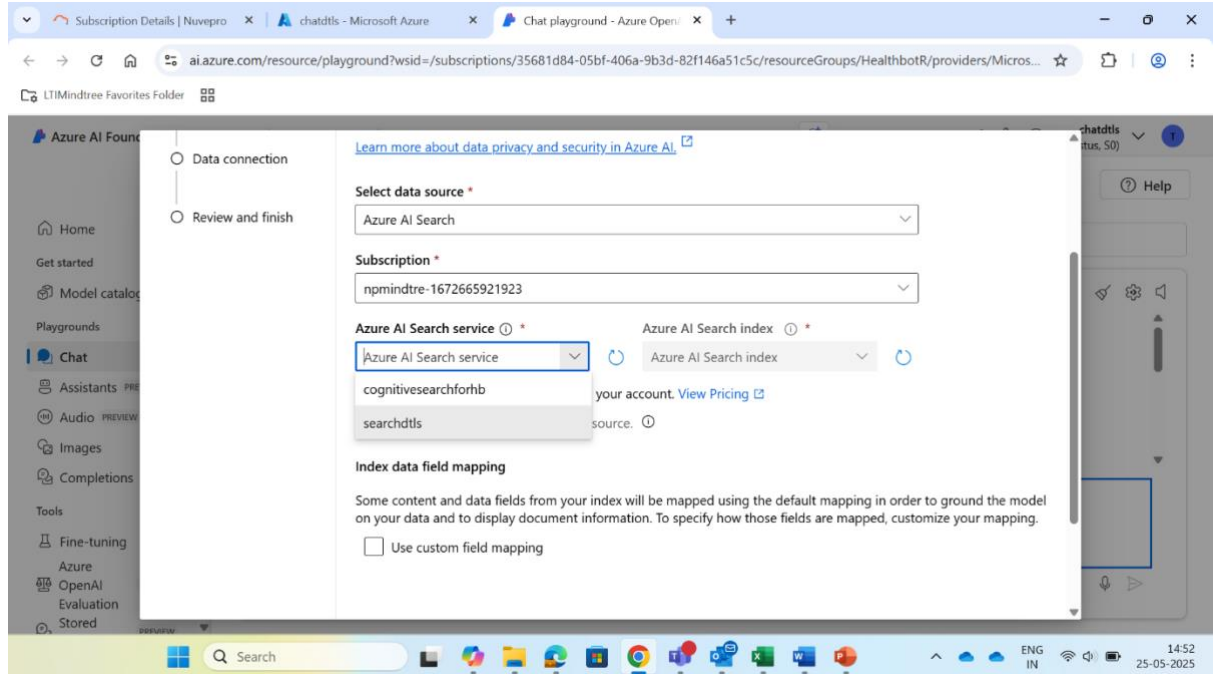- Scroll down to bottom, click on the Azure AI Foundry Portal.

- Now you will be redirected to this page. Add data from the data source which we have uploaded(custom data)
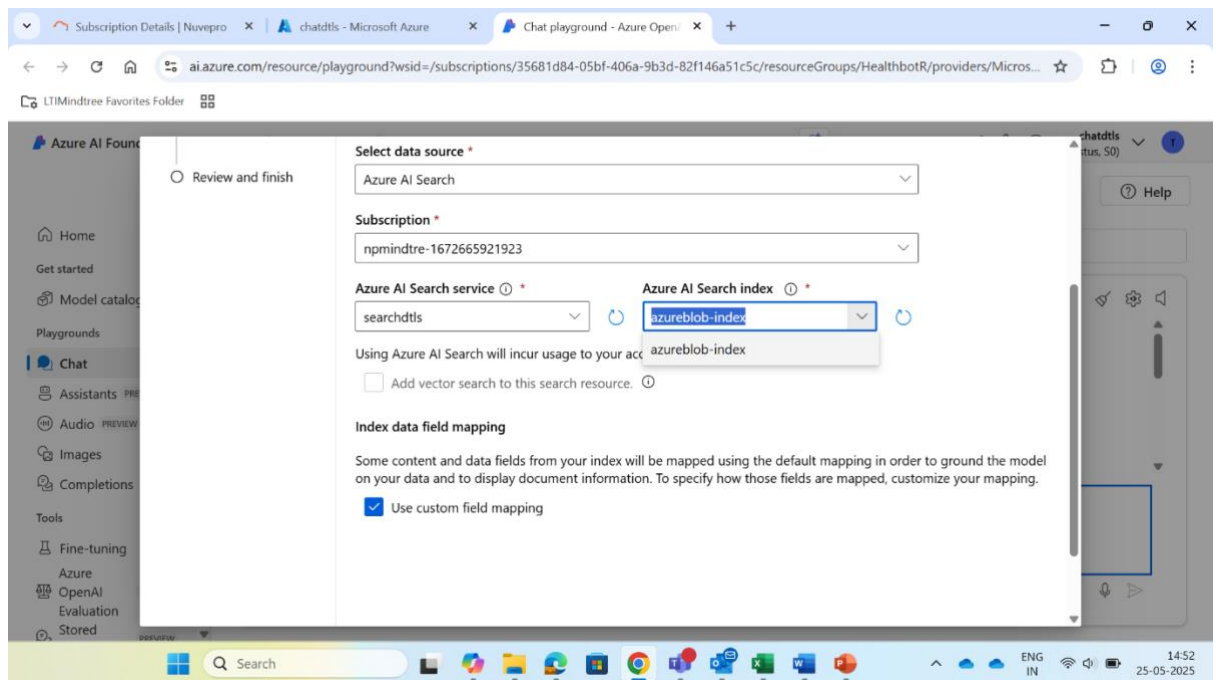
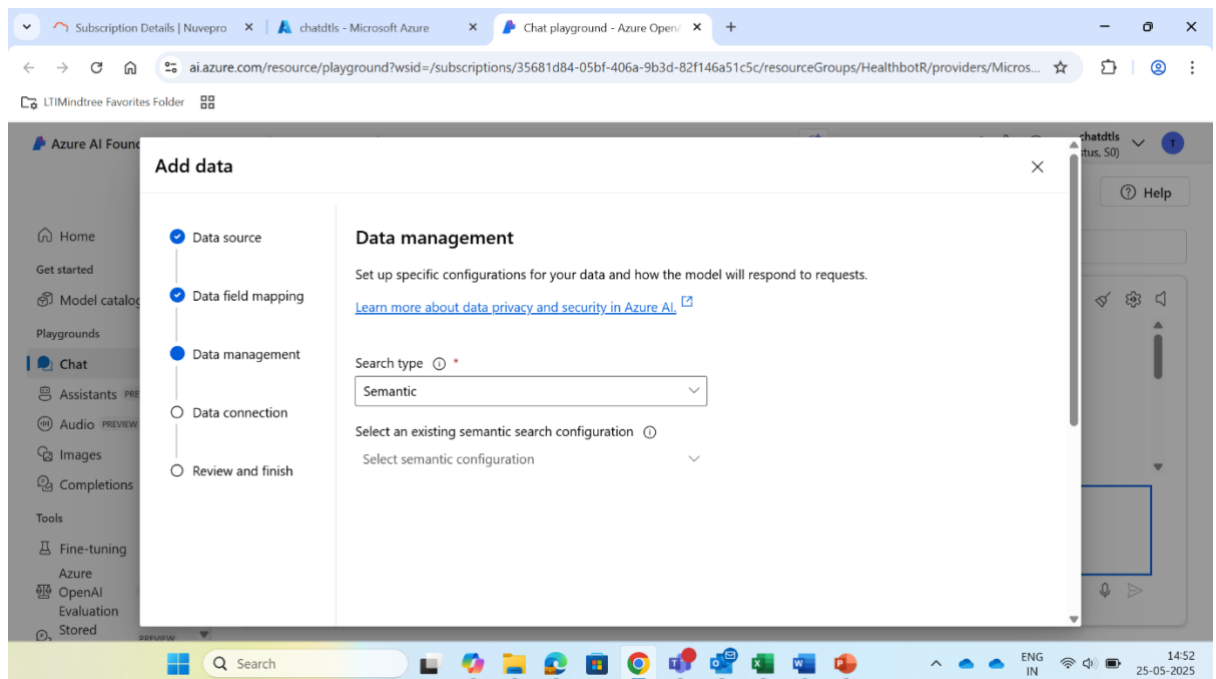- Select Azure AI search from the dropdown menu.

- Then you will see this window, select the Azure AI search service which we have created. Here it is 'searchdtls'.
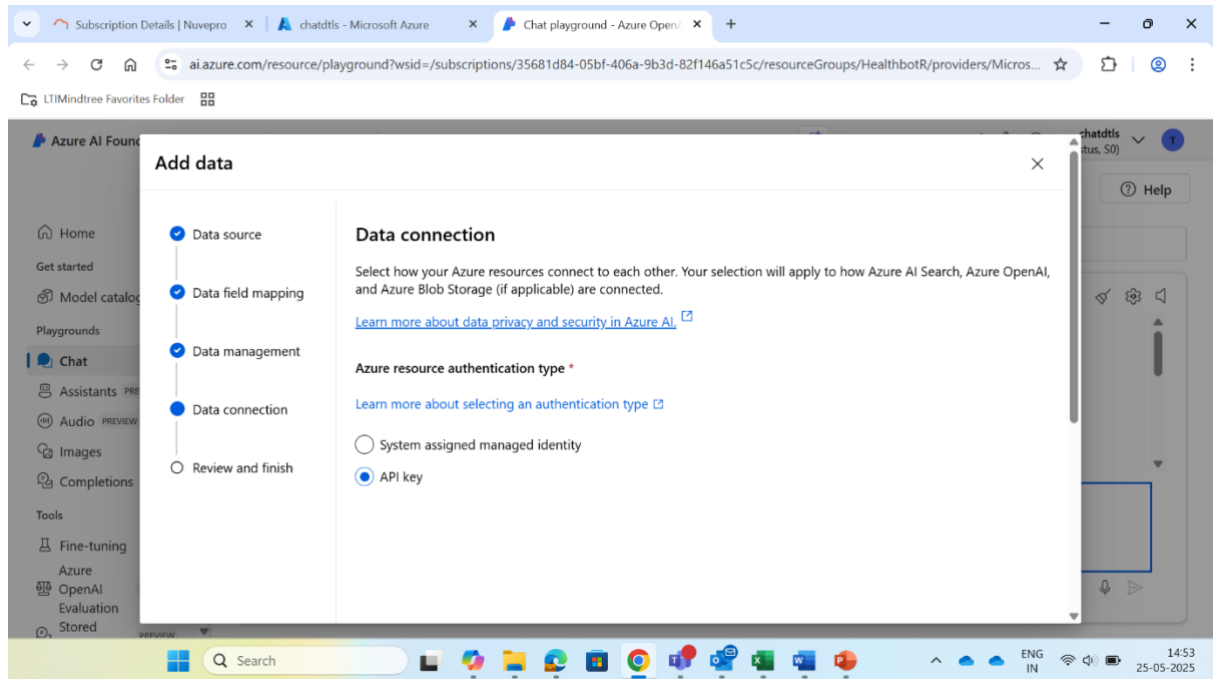
- After that select 'azureblob-index' from the Azure AI search index dropdown. Index is automatically created while importing the custom data. Check the tick box and click next.
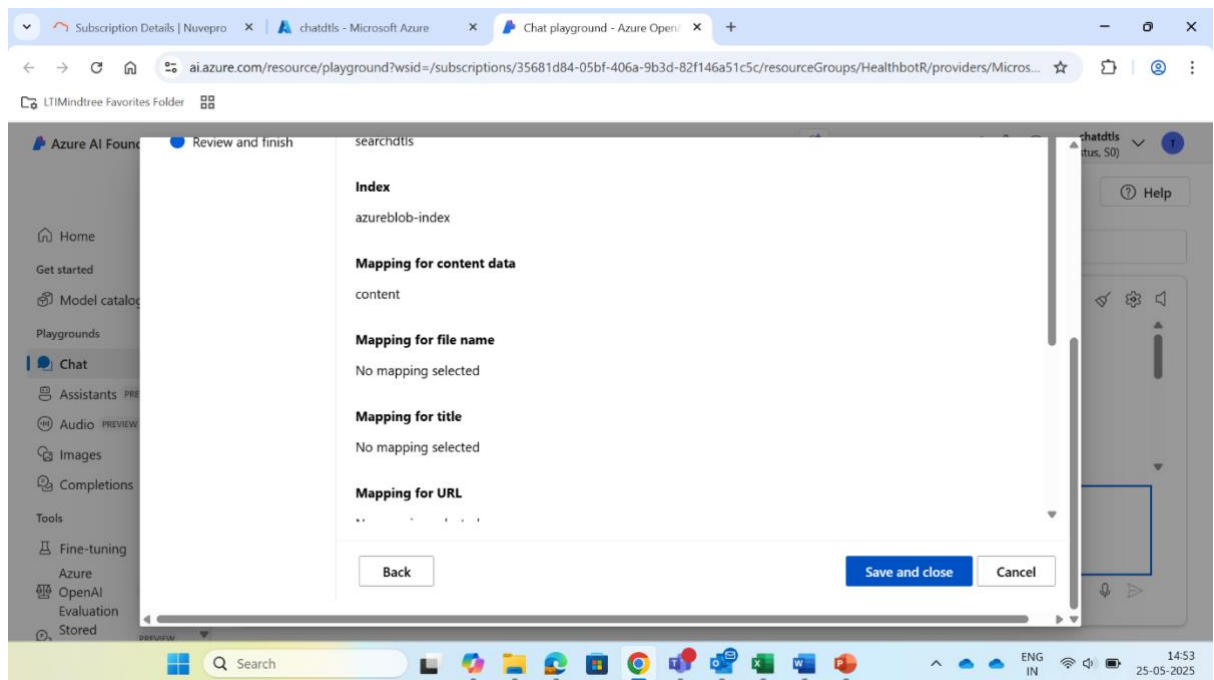

- Select the type 'keyword' from the search type dropdown.

- Select API key and click on next.

- Now click on save and close.

- Now the Health bot is connected to the custom data which we have provided. The Healthbot is now ready to answer your concerns. One point to remember here is that it gives the reply based on the data which we have given to it.

The sample data which we have given is mentioned below.

Health Issue	Common Medications	Specialist	Doctor's Name & Designation	Hospital	Nearby Medical Shops
Hypertension	Amlodipine, Losartan, Enalapril	Cardiologist	Dr. Indira Ramasahayam Reddy, MD (Internal Medicine)	Apollo Hea	MedPlus Pharmacy, Jubilee Hills; Apol
Diabetes Mellitus	Metformin, Glimepiride, Insulin	Endocrinologist	Dr. Alok Ranjan, MCh (Neurosurgery)	Apollo Hos	MedPlus Pharmacy, Banjara Hills; 24x
Asthma	Salbutamol, Budesonide, Montelukast	Pulmonologist	Dr. Amitava Ray, FRCS (Edinburgh), DM Cardiff (UK)	Apollo Hos	MedPlus Pharmacy, Ameerpet; Apollo
GERD (Acid Reflux)	Omeprazole, Ranitidine, Antacids	Gastroenterologist	Dr. Annam Sridhar, MBBS, DOMS	Apollo Hos	MedPlus Pharmacy, Banjara Hills; 24x
Urinary Tract Infection (UTI)	Nitrofurantoin, Ciprofloxacin, Amoxicillin	Urologist	Dr. Harish Kumar V, MBBS, MS, DNB Urology	Apollo Hos	MedPlus Pharmacy, Banjara Hills; 24x
Osteoarthritis	Paracetamol, Ibuprofen, Diclofenac	Orthopedic Surgeon	Dr. S V S Sreedhar, MBBS, MS General Surgery	Apollo Hos	MedPlus Pharmacy, Banjara Hills; 24x
Eczema	Hydrocortisone, Tacrolimus, Antihistamines	Dermatologist	Dr. Hemavathi B V, MBBS, DGO, DNB	Apollo Hos	MedPlus Pharmacy, Banjara Hills; 24x
Migraine	Sumatriptan, Propranolol, Amitriptyline	Neurologist	Dr. Alok Ranjan, MCh (Neurosurgery)	Apollo Hos	MedPlus Pharmacy, Banjara Hills; 24x
Anemia	Iron Supplements, Folic Acid, Vitamin B12	Hematologist	Dr. Indira Ramasahayam Reddy, MBBS, MD (Internal Medicine)	Apollo Hea	MedPlus Pharmacy, Banjara Hills; 24x
Depression	Fluoxetine, Venlafaxine (SSRIs, SNRIs)	Psychiatrist	Dr. Amitava Ray, FRCS (Edinburgh), DM Cardiff (UK)	Apollo Hos	MedPlus Pharmacy, Banjara Hills; 24x

Let's see some demo chats which healthbot has provided when asked.

</> View code

Setup　　　　　　　　　　　　　　　　　　　⊞ Hide

Deployment *　　　　＋ Create new deployment ⌄

gpt-4.1 (version:2025-04-14)　　　　　　　　⌄

Give the model instructions and context ⓘ

You are an AI assistant that helps people find
information.

💾 Apply　　　　✦ Generate system
changes　　　　　　prompt　　　　↺

＋ Add section ⌄

Chat history　　　　　　　　　🖋 ⚙ ◁

I am suffering with stomach pain what to do

🔸 **Azure AI Foundry | gpt-4.1**　AI-generated content may be incorrect

The requested information is not found in the retrieved data. Please try another
query or topic.

···　👍 👎

Type user query here. (Shift + Enter for new line)

188/1048576 tokens to be sent 📎 🎤 ▷

</> View code

Setup　　　　　　　　　　　　　　　　　　　⊞ Hide

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changes　　　　　　prompt　　　　↺

＋ Add section ⌄

Chat history　　　　　　　　　🖋 ⚙ ◁

Just tell whom to consult for eczema

🔸 **Azure AI Foundry | gpt-4.1**　AI-generated content may be incorrect

You should consult a dermatologist for eczema, specifically Dr. Hemavathi B V,
MBBS, DGO, DNB at Apollo Hospitals, Hyderabad [1] .

〉 1 references

Type user query here. (Shift + Enter for new line)

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</> View code

Gain insights into your own data source. Your data is
stored securely in your Azure subscription. Learn
more about how your data is protected. ↗

Data source:　　**Search Resource:**
Azure AI Search　　searchdtls

Index:
azureblob-index

Advanced settings 〉

🗑 Remove data source

〉 Parameters

Chat history　　　　　　　　　🖋 ⚙ ◁

Diabetes Mellitus
is it serious problem?

🔸 **Azure AI Foundry | gpt-4.1**　AI-generated content may be incorrect

Diabetes Mellitus can be a serious health issue if not properly managed, as it may
lead to complications such as cardiovascular disease, nerve damage, kidney
problems, and vision issues. It is important to consult an endocrinologist, such as
Dr. Alok Ranjan at Apollo Hospitals, Hyderabad, for appropriate diagnosis and

Type user query here. (Shift + Enter for new line)

286/1048576 tokens to be sent 📎 🎤 ▷

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Data source:	Search Resource:
Azure AI Search	searchdtls

Index:
azureblob-index

Advanced settings >

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Chat history   🖌 ⚙ 🔊

                                              in brief

🔥 **Azure AI Foundry | gpt-4.1** AI-generated content may be incorrect

Diabetes Mellitus is a serious health issue that requires proper management. It
usually involves taking medications like Metformin, Glimepiride, or Insulin, and
consulting an endocrinologist—such as Dr. Alok Ranjan at Apollo Hospitals,
Hyderabad—is recommended for effective care [1].

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Data source:	Search Resource:
Azure AI Search	searchdtls

Index:
azureblob-index

Advanced settings >

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Chat history   🖌 ⚙ 🔊

                              can you generate prescription

🔥 **Azure AI Foundry | gpt-4.1** AI-generated content may be incorrect

For Diabetes Mellitus, a typical prescription may include:

- Metformin
- Glimepiride
- Insulin

Type user query here. (Shift + Enter for new line)

250/1048576 tokens to be sent 📎 🎤 ▷

</> View code

Gain insights into your own data source. Your data is stored securely in your Azure subscription. Learn more about how your data is protected. ⧉

Data source: Search Resource:
Azure AI Search   searchdtls

Index:
azureblob-index

Advanced settings >

🗑 Remove data source

> Parameters

Chat history

- insulin

It is important to consult an endocrinologist, such as Dr. Alok Ranjan at Apollo Hospitals, Hyderabad, for proper diagnosis and a personalized treatment plan before starting any medication [1].

> 1 references

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250/1048576 tokens to be sent 📎 🎤 ➤