

Capstone Project

(Multimodal Generative AI E-Commerce Assistant)

1. Azure Portal – Resource Setup

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the 'Microsoft Azure' logo, a search bar, and a 'Copilot' button. The user's name 'Avinash-Sahadevappa_1...' is visible in the top right corner. The main content area displays the 'openai2' resource page. On the left, there is a sidebar with navigation links: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Resource Management, Security, Monitoring, Automation, and Help. The 'Overview' tab is selected. The main content area shows the 'Essentials' section with the following details:

- Resource group: Avinash
- Status: Active
- Location: East US
- Subscription: npwipro-1704709562215
- Subscription ID: ee839280-c293-4f67-8b13-8ac0c0b5f9d9
- Tags: Add tags

On the right side, there are additional details:

- API Kind: OpenAI
- Pricing tier: Standard
- Endpoints: Click here to view endpoints
- Manage keys: Click here to manage keys

Below the essentials section, there is a 'Get Started' button and a 'Develop' button. A large banner reads: 'Build your own secure copilot and generative AI applications with Azure OpenAI Service'. Below this banner, there is a description: 'Deploy an Azure OpenAI model and start making API calls. Connect your own data, call functions, and improve workflow with Azure OpenAI language, image and speech models. You can access the service through REST APIs, Python SDK, or our web-based interface in the Azure AI Foundry portal.' A 'Learn More' link is provided.

The screenshot shows the Microsoft Azure portal interface, specifically the 'Recent' resources page. The top navigation bar is the same as the previous screenshot. The main content area displays a list of recent resources. At the top, there are buttons: 'List supported metrics for these resources', 'Compare metrics across these resources', and 'Generate Bicep code for managing multiple resources'. Below these buttons, there is a 'Manage view' dropdown, a 'Refresh' button, and an 'Export to CSV' button. There is also a 'Filter for any field...' input and a list of filters: 'Subscription equals all', 'Resource Group equals all', 'Type equals all', and 'Location equals all'. The table below shows the following resources:

Name	Type	Location	Resource Group	Subscription	Last accessed
openai2	Azure OpenAI	East US	Avinash	npwipro-1704709562215	47 minutes ago
Avinash	Resource group		Avinash	npwipro-1704709562215	47 minutes ago

At the bottom of the page, there is a 'Showing 1 - 2 of 2. Display count: au...' dropdown and a 'Give feedback' link.

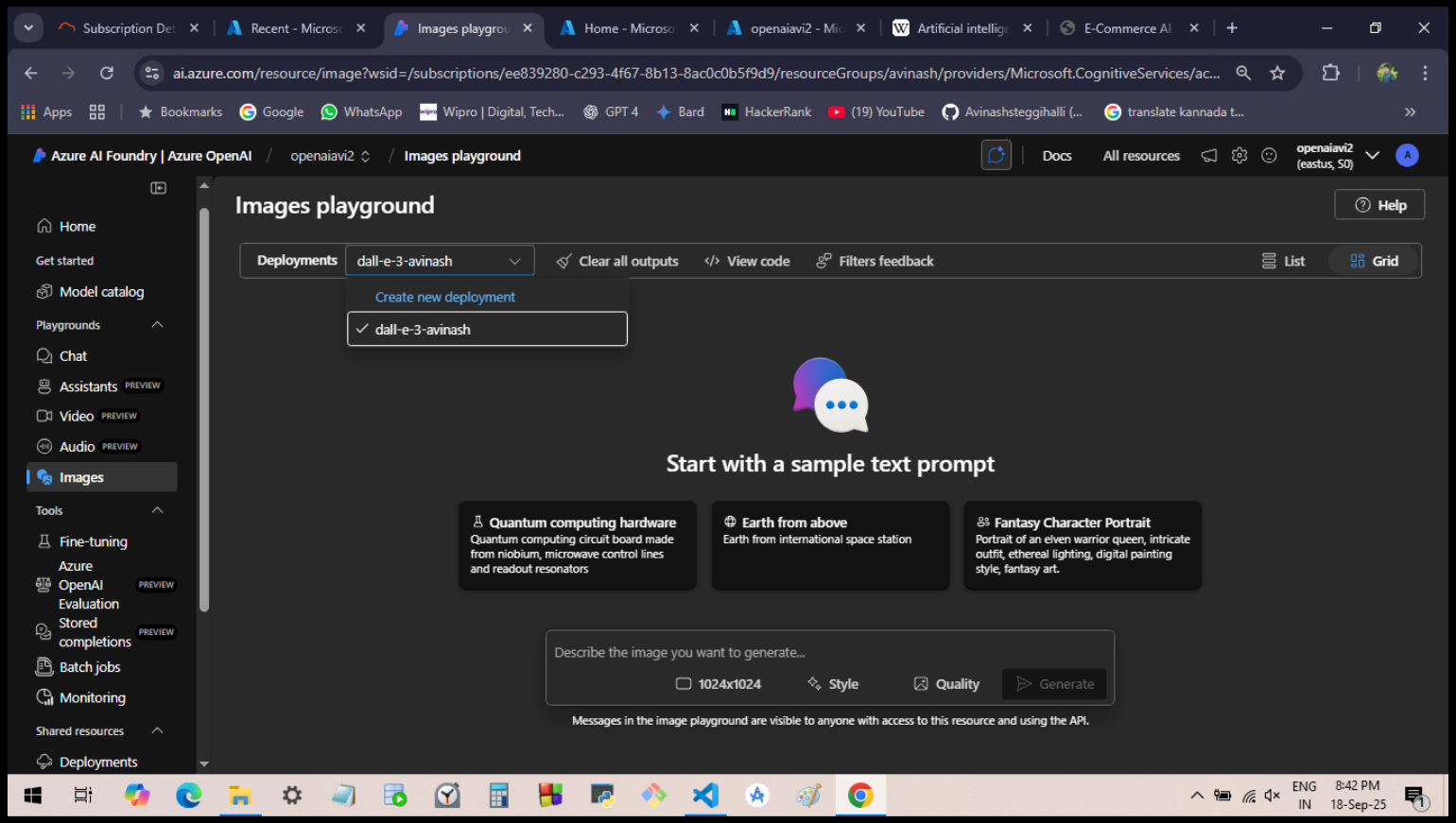
2. Azure OpenAI – Deployments

The screenshot shows the Azure OpenAI portal interface. The browser address bar displays the URL: `ai.azure.com/resource/deployments/%2Fsubscriptions%2Fee839280-c293-4f67-8b13-8ac0c0b5f9d9%2FresourceGroups%2Favinash%2Fproviders%2FMicrosoft...`. The page title is "gpt-4o-2024-08-06-ft-31326cc41aff44a1ae97b55d63ca7073". The left sidebar contains navigation options: Video, Audio, Images, Tools, Fine-tuning, Azure OpenAI, Evaluation, Stored completions, Batch jobs, Monitoring, Shared resources, and Deployments (selected). The main content area is divided into two columns. The left column, titled "Details", includes tabs for "Details", "Metrics", and "Risks & Safety". It features a "Target URI" field with the value `https://openaiavi2.openai.azure.com/openai/deploymen...` and a "Key" field. Below this is a "Deployment info" table with the following data:

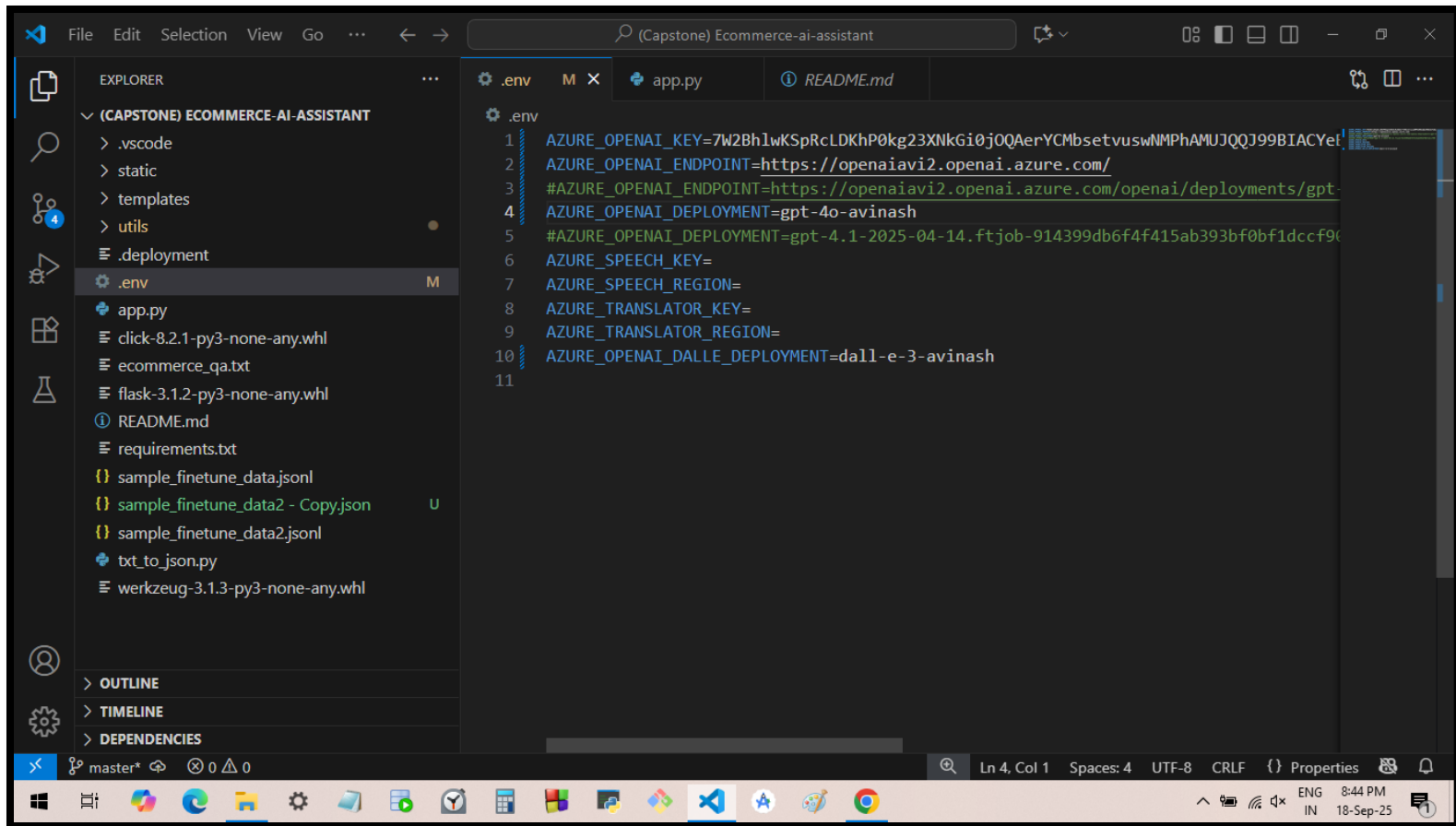
Name	Provisioning state
gpt-4o-2024-08-06-ft-31326cc41aff44a1ae97b55d63ca7073	Succeeded
Deployment type	Created on
Global Standard	2025-09-18T18:01:17.9015923Z
Created by	Modified on
Avinash-Sahadevappa_1756868193262	Sep 18, 2025 11:31 PM

The right column, titled "Get Started", includes a "Language" dropdown set to "Python", an "SDK" dropdown set to "Azure OpenAI SDK", and an "Authentication type" dropdown set to "Key Authentication". It also features a "Get Started" button and a section titled "1. Authentication using API Key" with instructions on how to use the API key.

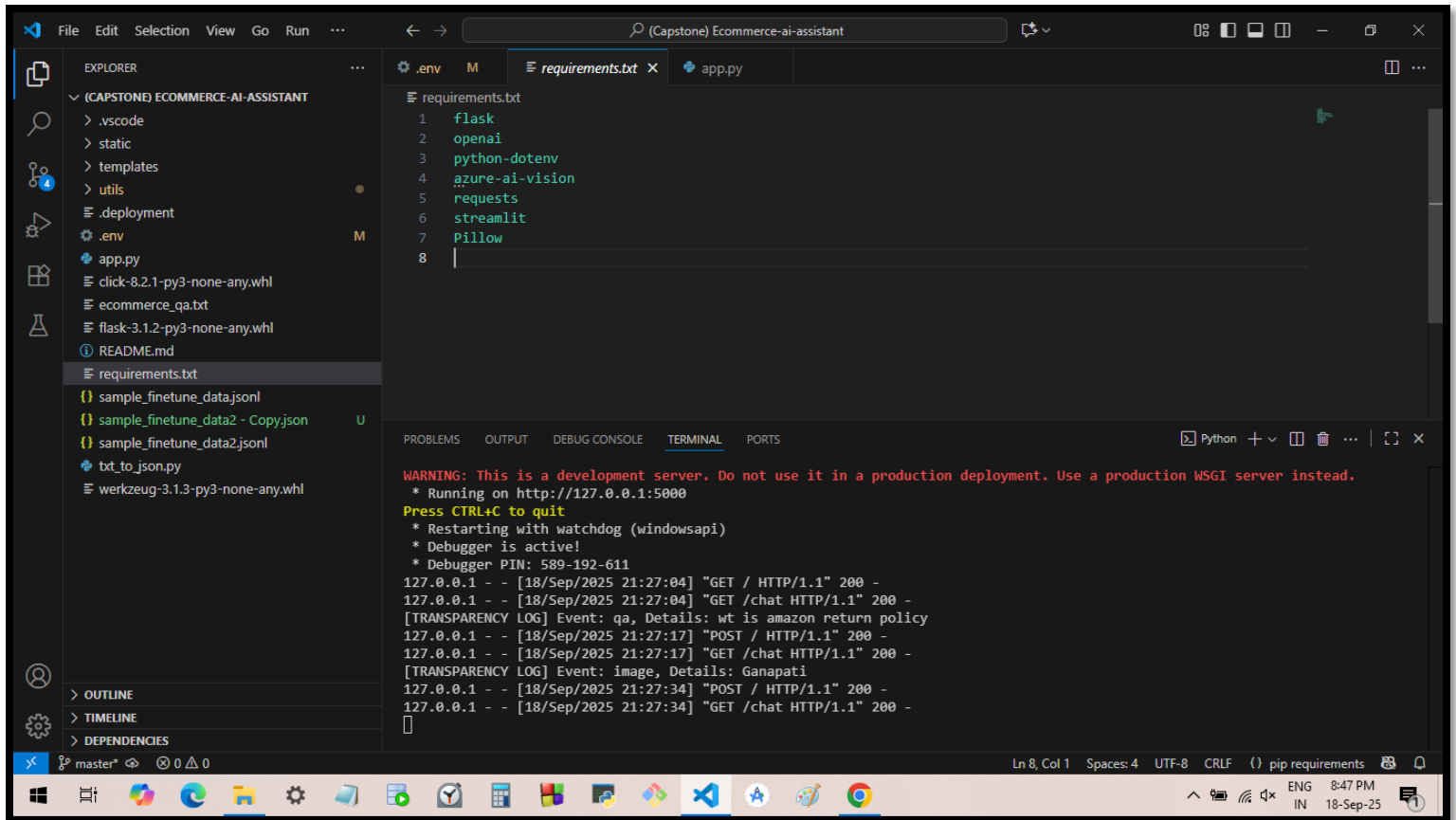
The screenshot shows the Azure OpenAI Chat playground interface. The browser address bar displays the URL: `ai.azure.com/resource/playground?wsid=/subscriptions/ee839280-c293-4f67-8b13-8ac0c0b5f9d9/resourceGroups/avinash/providers/Microsoft.CognitiveServ...`. The page title is "Chat playground". The left sidebar contains navigation options: Home, Get started, Model catalog, Playgrounds, Chat (selected), Assistants, Video, Audio, Images, Tools, Fine-tuning, Azure OpenAI, Evaluation, Stored completions, Batch jobs, Monitoring, Shared resources, and Deployments. The main content area is divided into two columns. The left column, titled "Setup", includes a "Deployment" dropdown set to "gpt-4o-2024-08-06-ft-31326cc41aff44a1ae97b55d63ca7073" and a "gpt-4o-avinash (version:2024-11-20)" dropdown. It also features a "gpt-4o-2024-08-06-ft-31326cc41aff44a1ae97b55d63ca7073 (version:1)" dropdown and a "Generate system prompt" button. The right column, titled "Chat history", includes a "Start with a sample prompt" section with three options: "Dialogue creation", "Travel guide", and "Poetry generation". It also features a "Type user query here. (Shift + Enter for new line)" input field and a "11/undefined tokens to be sent" status indicator.



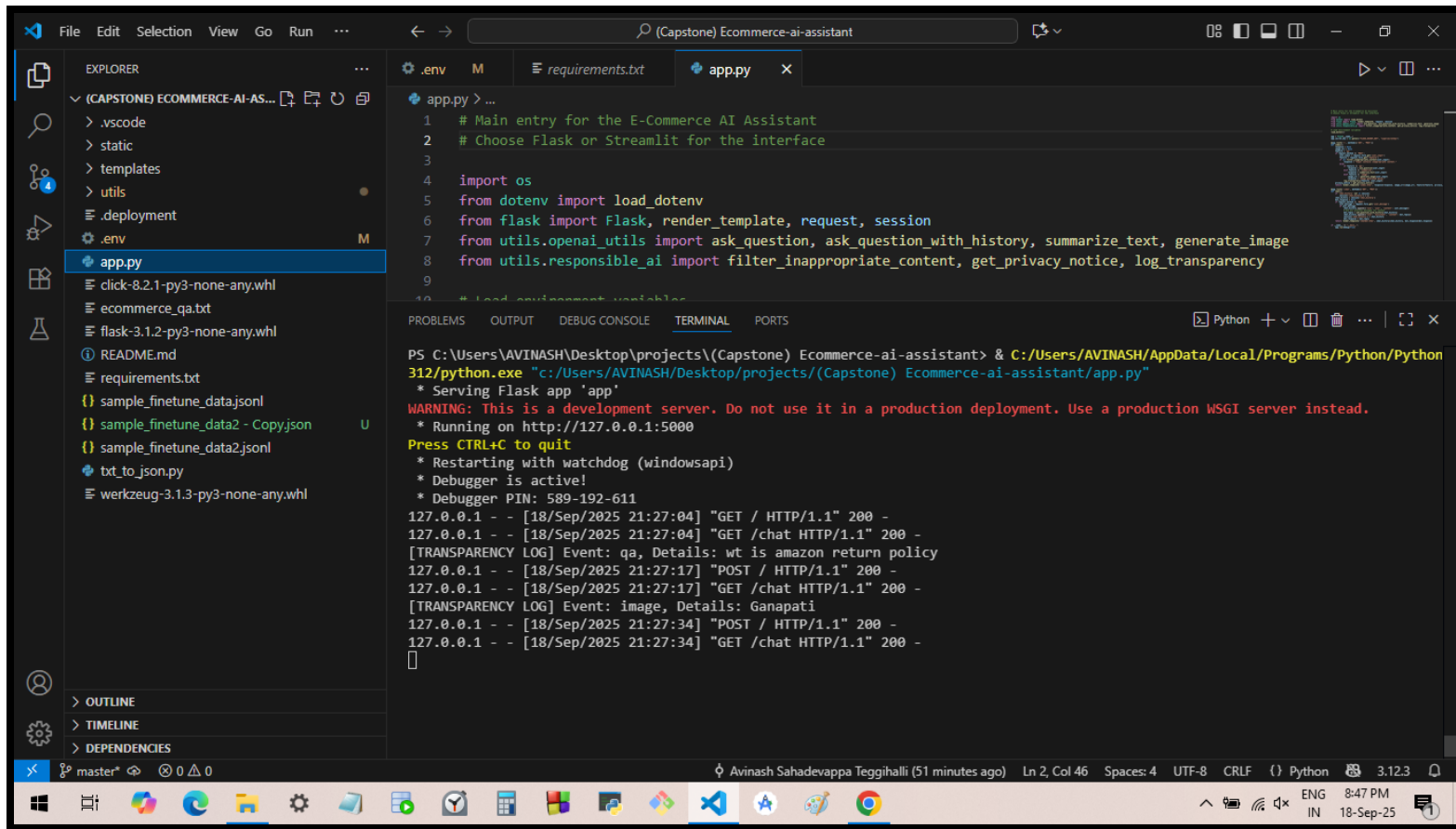
3. .env File Setup (Local Machine)



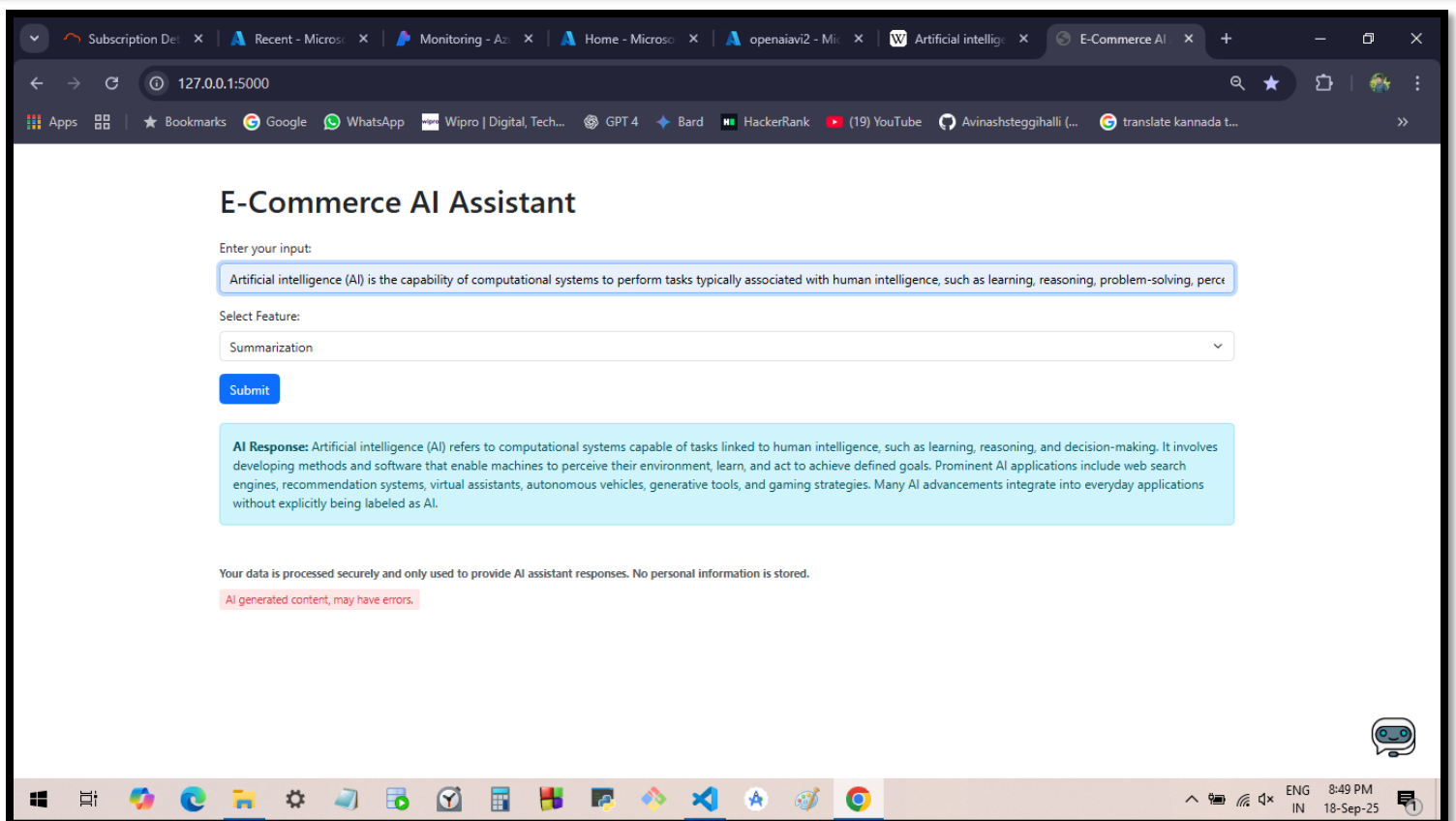
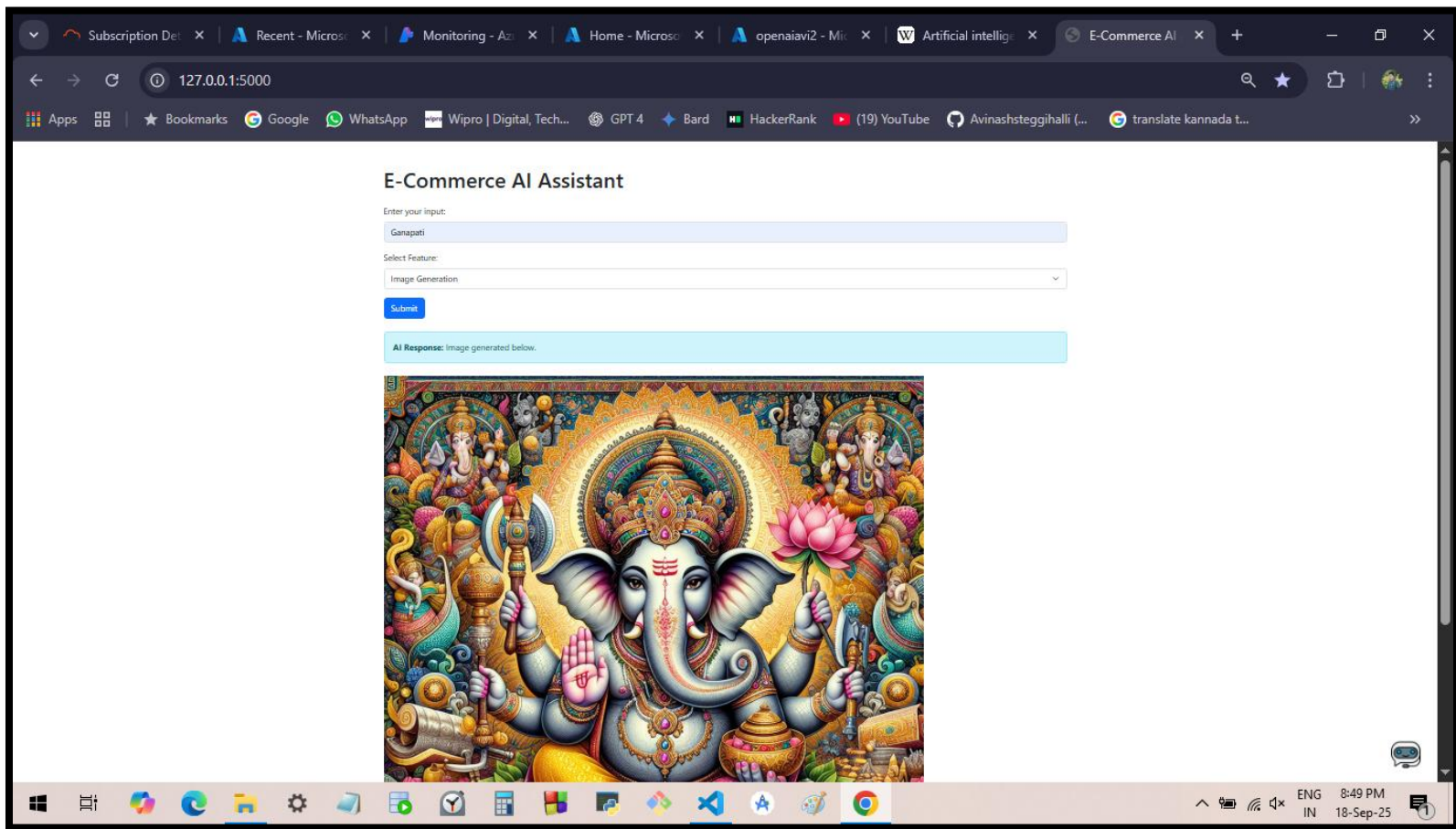
4. Dependencies Installation

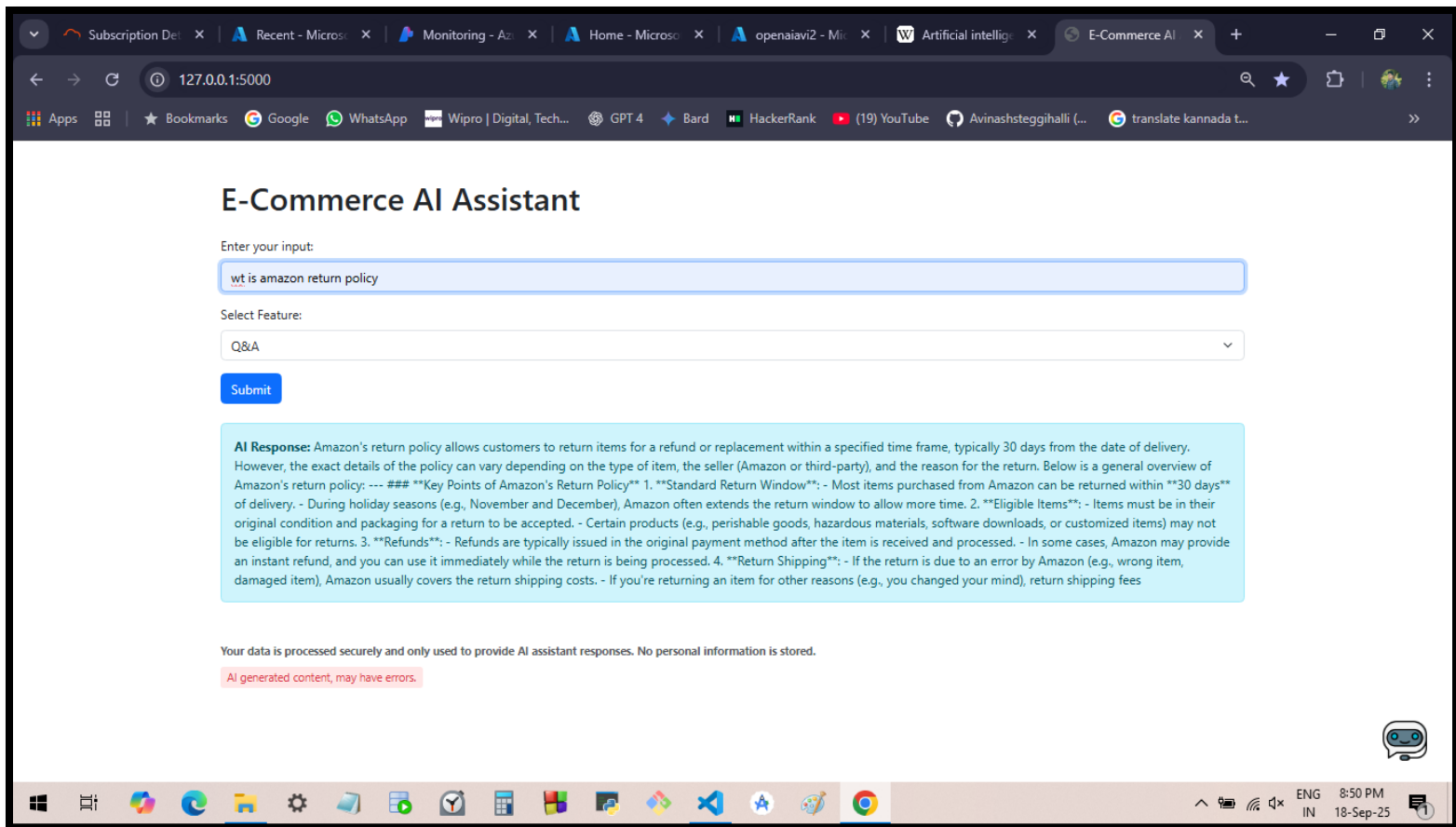


5. Running the App



6. Web UI – Assistant in Action





Enter your input:

Select Feature:

Submit

Your data is processed securely and only used to provide AI assistant responses. No personal information is stored.

