



# Applications of Azure Developer Tools

## Azure OpenAI & GitHub Copilot



# DATACOM

So, who am I?

My name is Luke Murray

He/Him

Senior Consultant at Datacom in  
Hamilton, New Zealand.

Feel free to reach out on Social  
Media, if you need any help:  
<https://linktr.ee/lukemurray>

## Azure Cloud Commanders



Today, we are going to look into tools that we use every day, and touch on Azure Open AI and GitHub Copilot!



**Leave questions till the end.**



**Feel free to reach out on Social media**



## Microsoft and OpenAI partnership



*Ensure that artificial  
general intelligence (AGI)  
benefits humanity*



*Empower every person and  
organization on the planet  
to achieve more*

GPT-3.5

Text

ChatGPT and GPT-4

Conversation

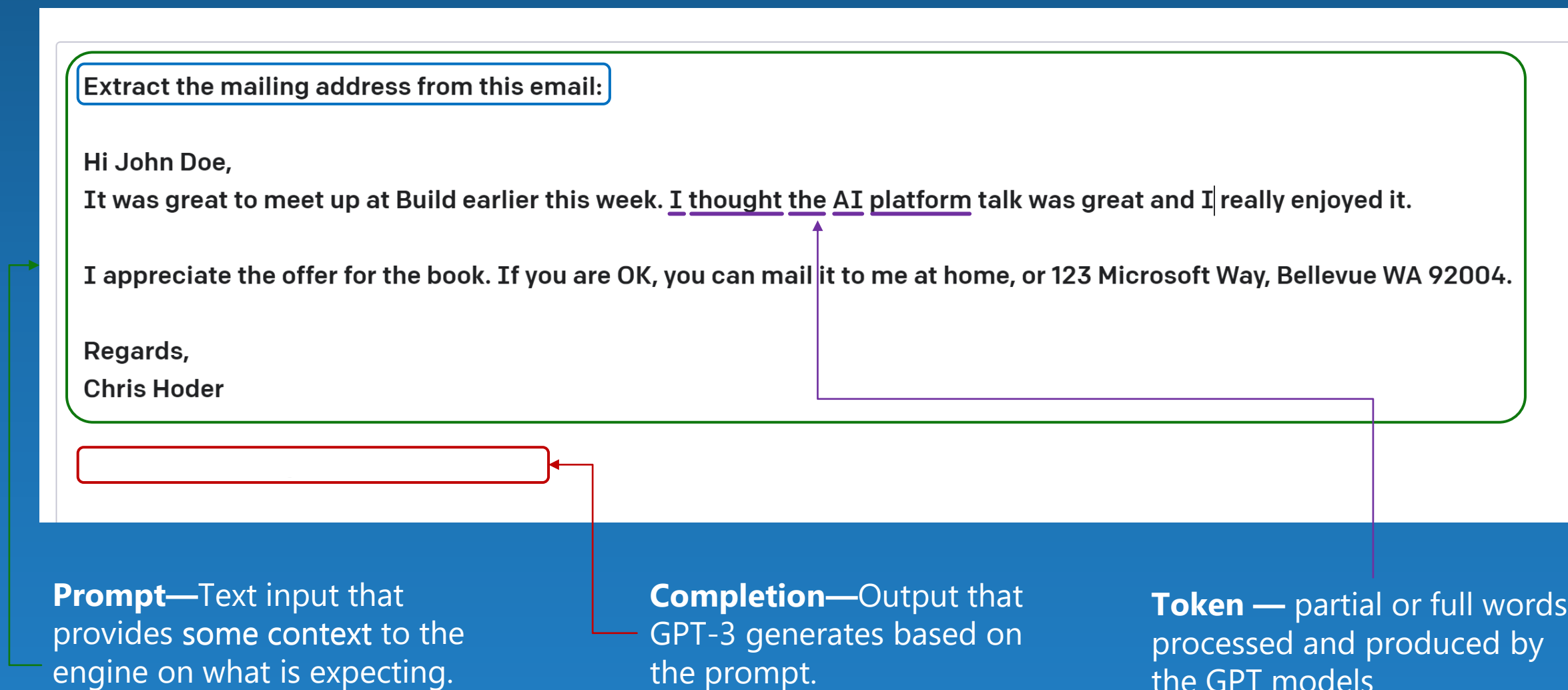
Codex

Code

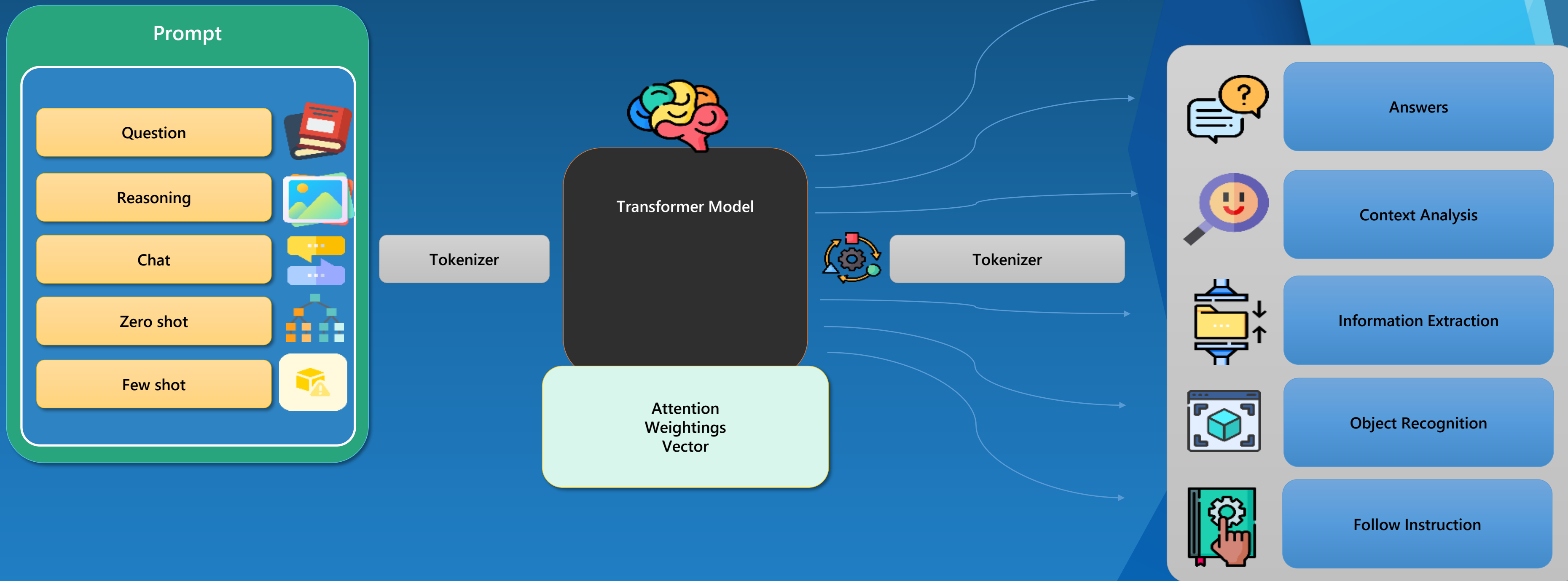
DALL·E 2

Images

# | OpenAI Key Terms



<https://learn.microsoft.com/en-us/legal/cognitive-services/openai/transparency-note>





GPT-3.5  
ChatGPT (preview)  
GPT-4 (preview)



Large, pretrained Language Models  
that use deep learning to produce text outputs



Custom-tunable AI models with your data



Built-in responsible AI to detect and  
mitigate harmful use

## Comparison of GPT versions

### GPT-3.5

- Most economical GPT model in Azure OpenAI Service
- Available in Western Europe
- Use-case specific models to optimize inference time and performance
- Suitable for a large range of use cases

### ChatGPT (preview)

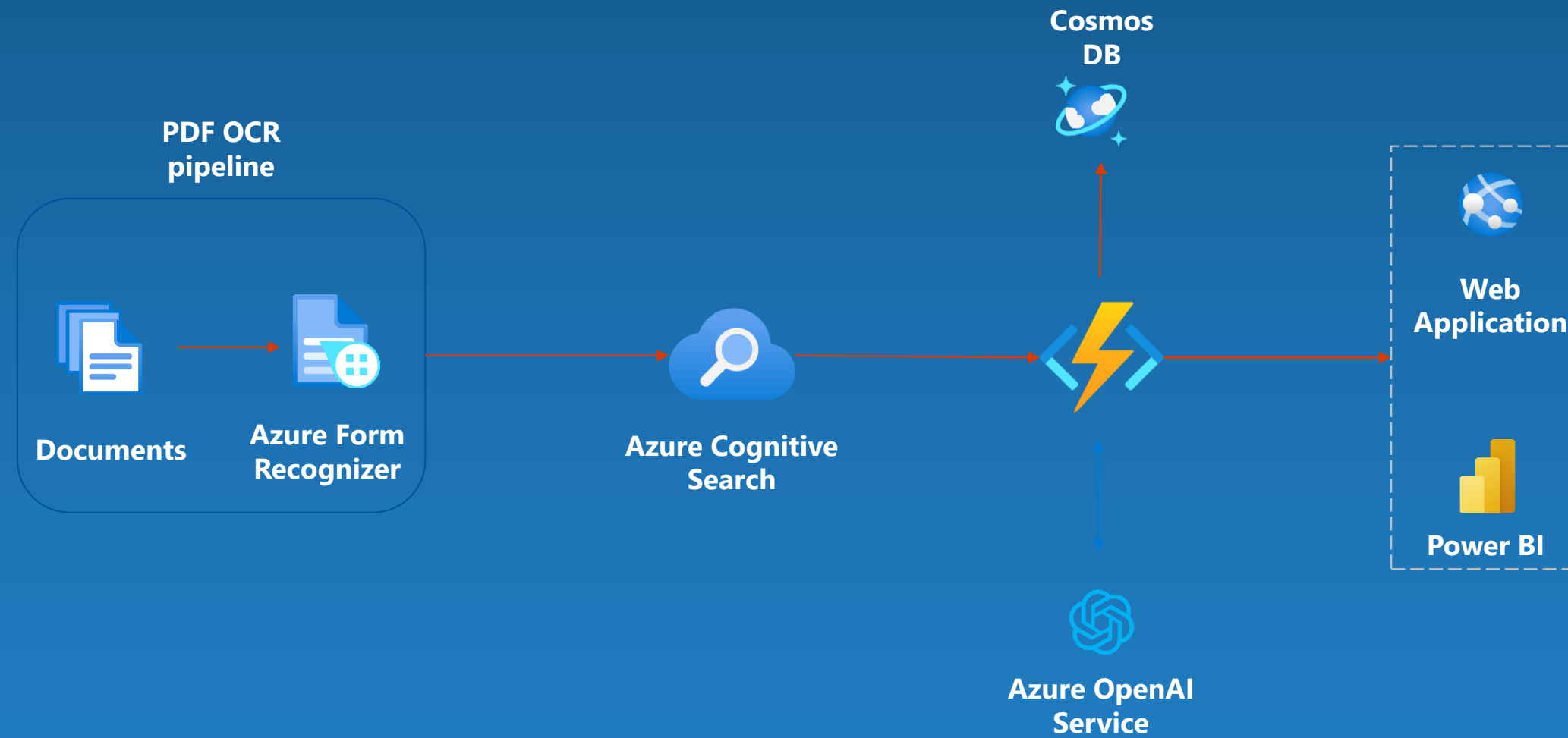
- Should be first choice for most use cases
- For all workloads, not just Chat

### GPT-4 (preview)

- Improved problem solving and reasoning capabilities
- Iterative refinement:
  - Paste in code errors & GPT-4 will fix for you
  - Iterate on stories
- Increased token limit - works well for long content

# Document Process Automation

Extract rich insights from documents and summarize  
<https://azureaidevs.github.io/hub/2023-aia/day10>





tell me about Azure Elastic SAN?

if you don't know, state you don't know and why you don't know



I apologize for any confusion caused. As of my knowledge cutoff in September 2021, I don't have information about a specific service called "Azure Elastic SAN" offered by Microsoft Azure. It's possible that this service may have been introduced or renamed after my knowledge cutoff date. Microsoft Azure frequently updates its services and introduces new features, so it's always a good idea to refer to the official Azure documentation or website for the most up-to-date information on their offerings.





**KEEP  
CALM  
AND  
DEMO IT IN  
AZURE**

**Azure Open AI  
- Azure Docs**

## Next up, [Codespaces](#) and [GitHub Copilot Chat](#)

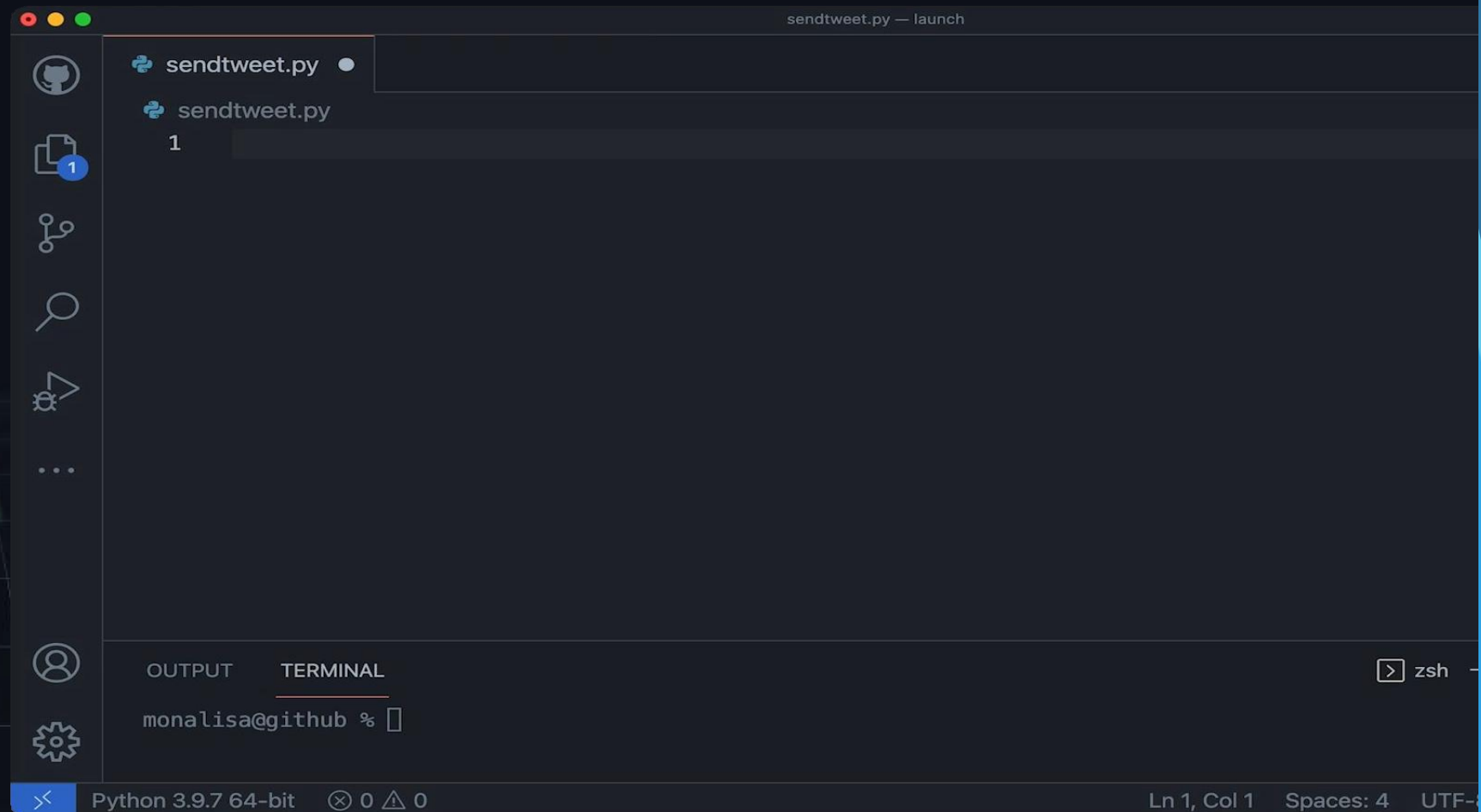
Spin up fully configured dev environments in the cloud that start in seconds with up to 60 hours a month free.

[Get started for free](#) [Plans and pricing](#)



GitHub Copilot

# Your AI Pair Programmer



# The main features

## Convert comments to code

```
1 #!/usr/bin/env ts-node
2
3 import { fetch } from "fetch-h2";
4
5 // Determine whether the sentiment of text is positive
6 // Use a web service
7 async function isPositive(text: string): Promise<boolean> {
8   const response = await fetch('http://text-processing.com/api/sentiment/', {
9     method: "POST",
10    body: `text=${text}`,
11    headers: {
12      "Content-Type": "application/x-www-form-urlencoded",
13    },
14  });
15  const json = await response.json();
16  return json.label === "pos";
17 }
```

Copilot

## Autofill repetitive code

```
1 const seconds = 3600
2 const minutes = seconds / 60
3 const hours = minutes / 60
4 const days = hours / 24
5 const weeks = days / 7
6 const months = days / 30
7 const years = months / 12
```

Copilot

## Show alternatives

```
1 def max_sum_slice(xs):
2   max_ending = max_so_far = 0
3   begin = end = 0
4   for i, x in enumerate(xs):
5     if max_ending + x > 0:
6       max_ending += x
7     else:
8       max_ending = 0
9       begin = i
10    if max_ending > max_so_far:
11      max_so_far = max_ending
12    end = i
13   return begin, end, max_so_far
```

```
1 def max_sum_slice(xs):
2   if not xs:
3     return 0
4
5   max_ending = max_slice = 0
6   for x in xs:
7     max_ending = max(0, max_ending + x)
8     max_slice = max(max_slice, max_ending)
9   return max_slice
```



**KEEP  
CALM  
AND  
DEMO IT IN  
AZURE**

**Codespaces  
and GitHub  
Chat**

## | Do not humanize AI!

Generative AI

**is not:**

- **Intelligent**
- **Deterministic**
- **Trustworthy**

Always ensure to use AI output **responsibly**.

[aka.ms/responsibleaiprinciples](https://aka.ms/responsibleaiprinciples)



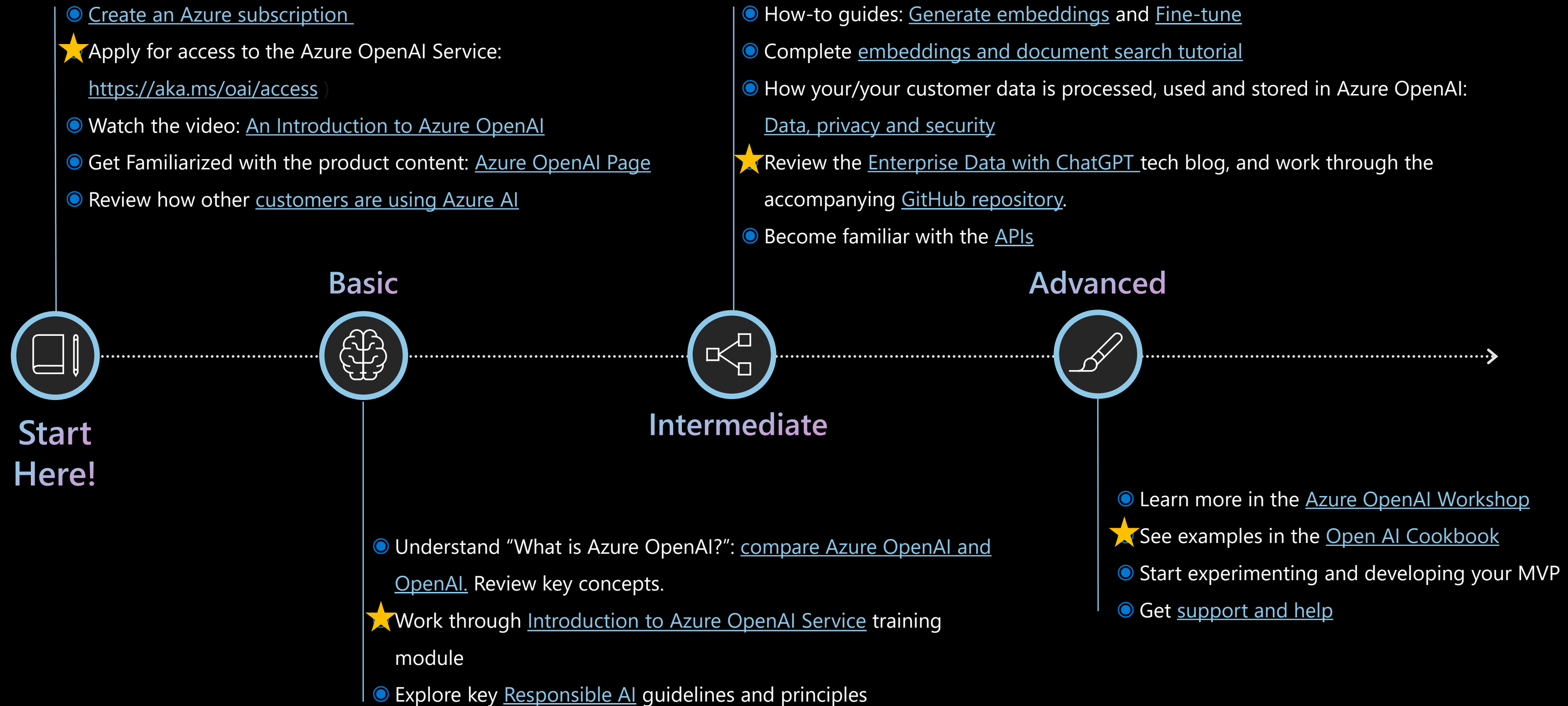
*Image created by DALL E2*



THANK YOU!



# Azure OpenAI Service Learning Guide







# Get your GitHub benefits

Learn and teach using real-world developer tools

Select the academic status \*

☐  Teacher ☒  Student

## Benefits for Students



STUDENT

FREE [GitHub Pro](#) while you are a student



STUDENT

Valuable [GitHub Student Developer Pack](#) partner offers



STUDENT

[Github Campus Expert](#) training for qualified applicants

### To qualify for student benefits, you must:

- Be currently enrolled in a degree or diploma granting course of study such as a high school, secondary school, college, university, homeschool, or similar educational institution.
- Have a verifiable school-issued email address or upload documents that prove your current student status.
- Have a GitHub user account.
- Be at least 13 years old.

### Offer availability:

- All partner offers are subject to the partner company's terms and conditions and may not be available in all regions.

## You've already submitted 1 request

Approved

Submitted Jul 28,  
2017

Congrats! Your request for [@lukemurraynz](#) was approved and your benefits are now available.

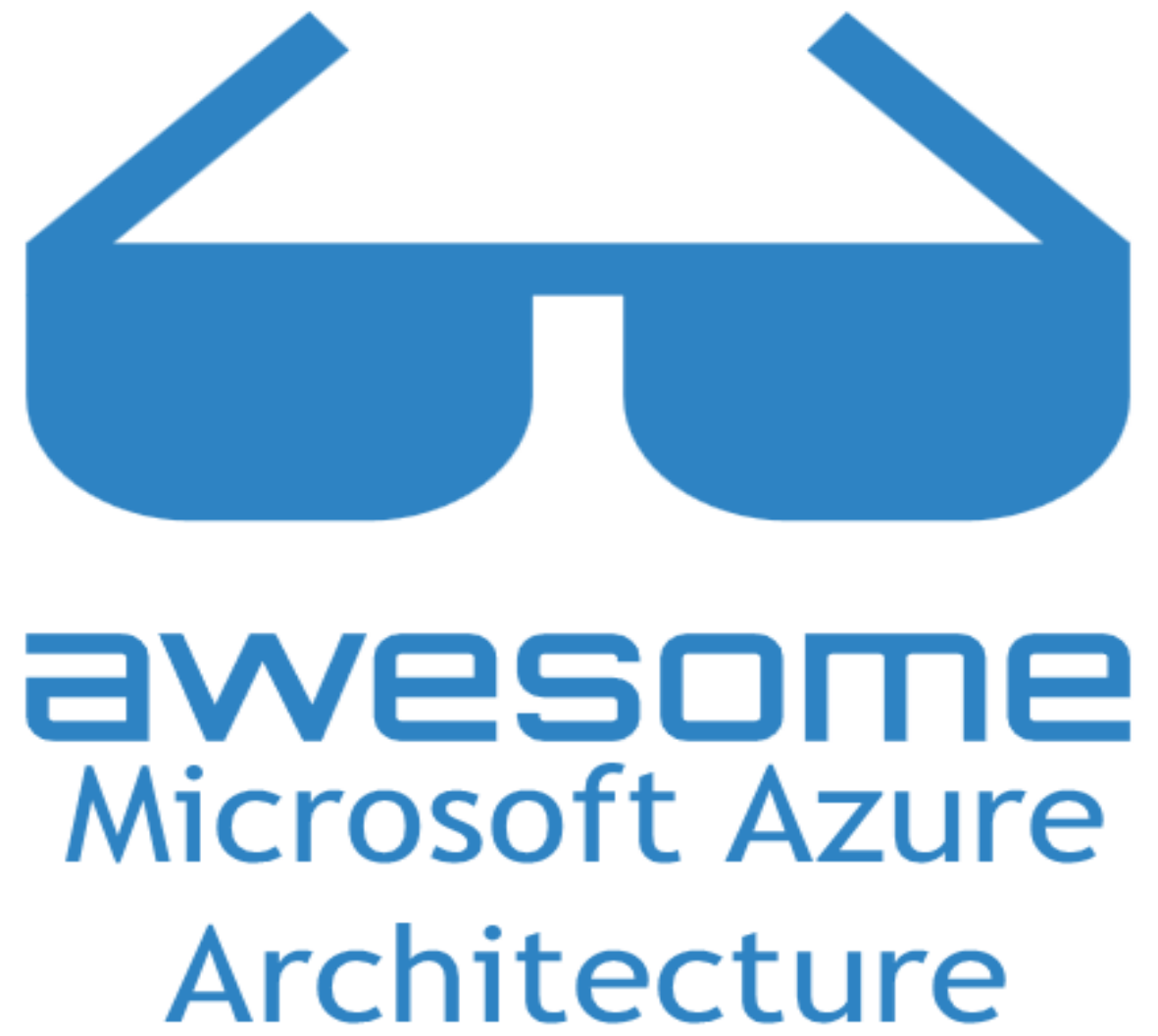
## GitHub Student Developer Pack

Learn to ship software like a pro. There's no substitute for hands-on experience. But for most students, real world tools can be cost-prohibitive. That's why we created the GitHub Student Developer Pack with some of our partners and friends.

Sign up for Student Developer Pack

Love the pack? Spread the word

<https://education.github.com/benefits?type=student>



# Awesome Azure Architecture

A curated list of AWESOME blogs, videos, tutorials, code, tools & scripts related to the design and implementation of solutions in Microsoft Azure.

This list contains anything that can help with your **Microsoft Azure architecture** and quickly get you up and running when designing, planning, and implementing services that empower organisations around the planet to achieve more.

This list can be found at [aka.ms/AwesomeAzureArchitecture](https://aka.ms/AwesomeAzureArchitecture).