AI for Cloud Developers

GitHub Copilot and Azure Copilot

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App Innovation specialist Microsoft

Microsoft
GitHub Copilot

Who is Copilot for?

Senior Engineers

Accelerate boilerplate code generation leverage design patterns, and simplify complex problem-solving.

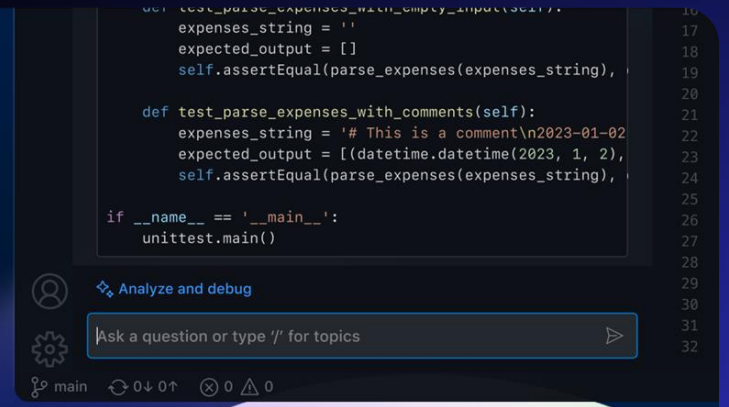
Junior Engineers

Expedite learning, facilitate as a pair programmer, and mentor.

Global shift in the way software is developed.

Copilot enables
55% faster coding
and
15% higher code quality

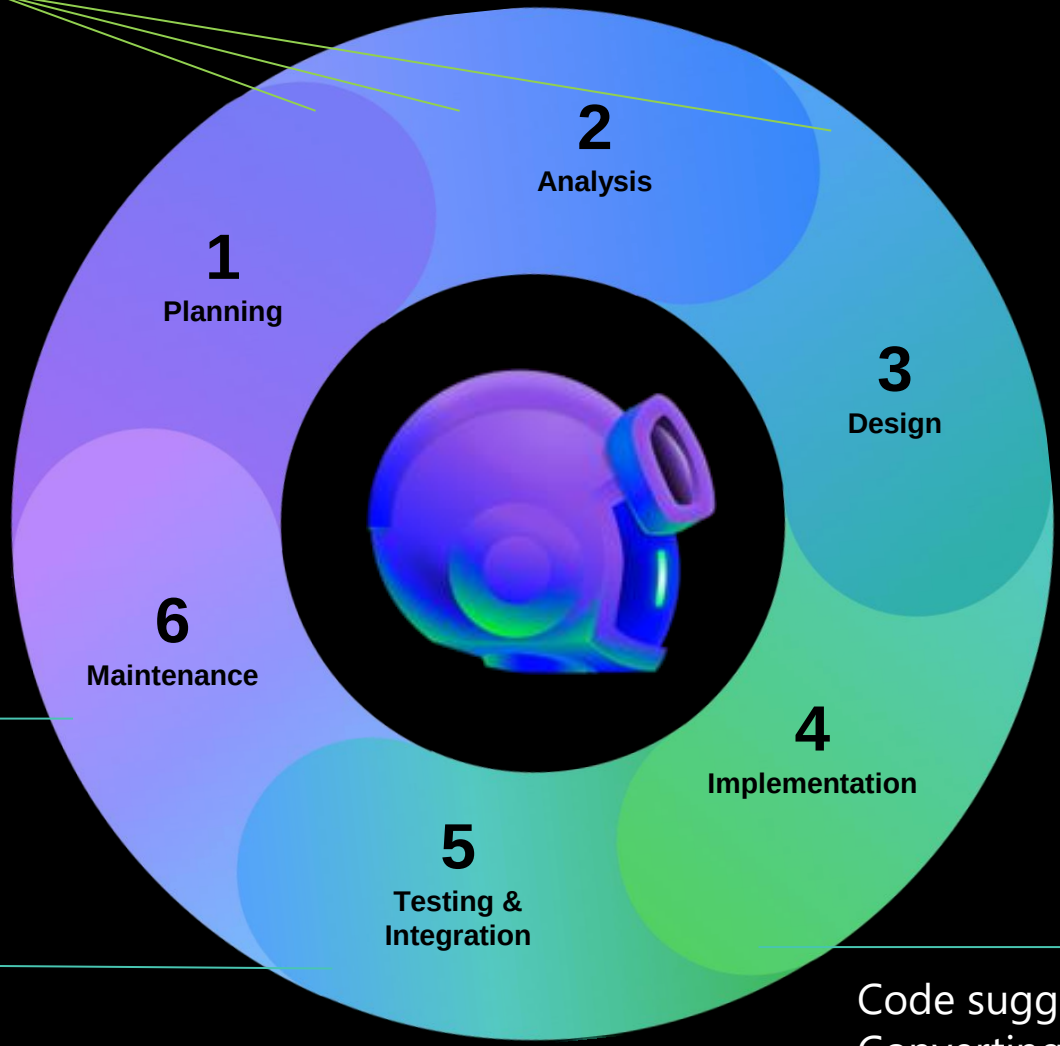
50,000+ businesses
building software with Copilot



Coca-Cola · COYOTE LOGISTICS · duolingo · gm · mercado libre · shopify · stripe

GitHub Copilot Workspace (soon)

GitHub Copilot in the Software Development Lifecycle



Refactoring code
Explaining code
Writing documentation

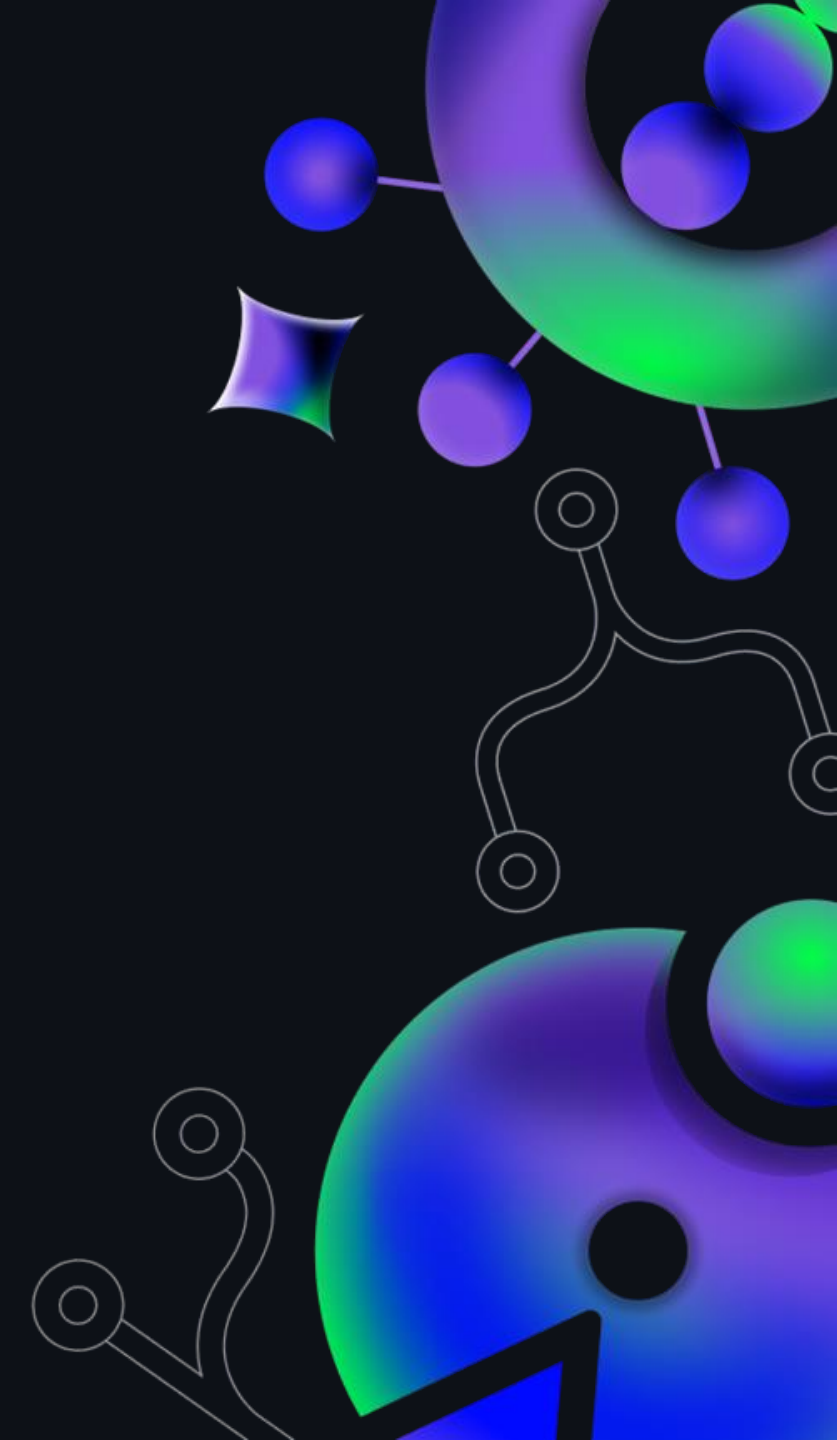
Writing tests
Fixing code errors
Summarizing pull requests
Guiding on configuring local environment

Code suggestions
Converting comments to code
Autofill for repetitive code
Showing alternatives

https://en.wikipedia.org/wiki/Systems_development_life_cycle

Challenges to overcome

- Complex codebases
- Fragmented knowledge consumption
- Lengthy onboarding process
- Tight deadlines
- Repetitive tasks
- Long-standing, historical repositories
- Knowledge discovery, analysis, and collaboration
- Navigating unfamiliar codebases
- Code reuse



- The submission process itself is handled by the `TalkSubmitView` class in `views.py`. This is a `CreateView` which requires the user to be logged in (`LoginRequiredMixin`). The form asks for 'title', 'abstract', and 'track' fields for a talk. Once the form is filled out and submitted, the talk is associated with the logged-in user and saved to the database (source).

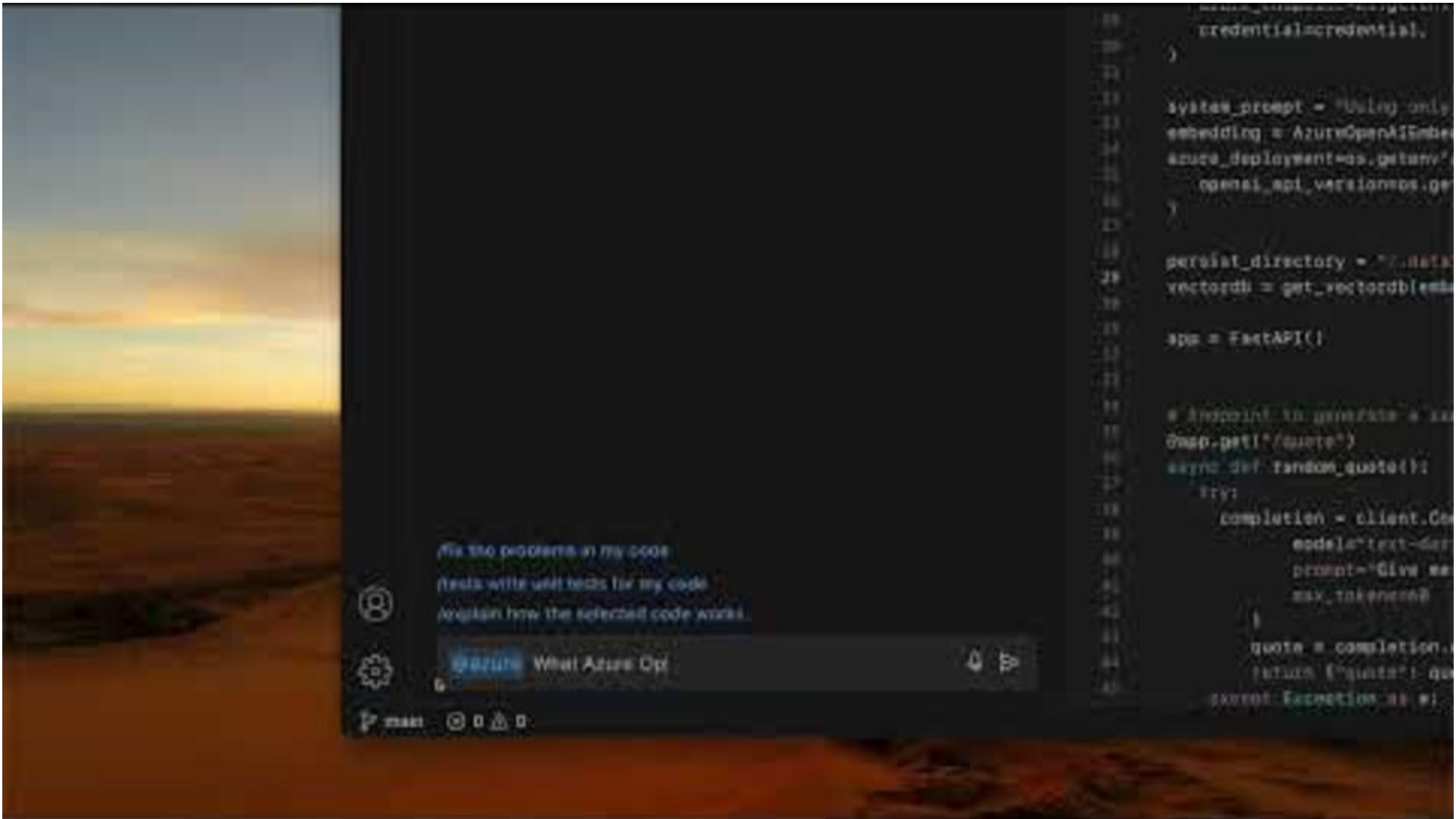
Is there anything else you'd like to know about this process?

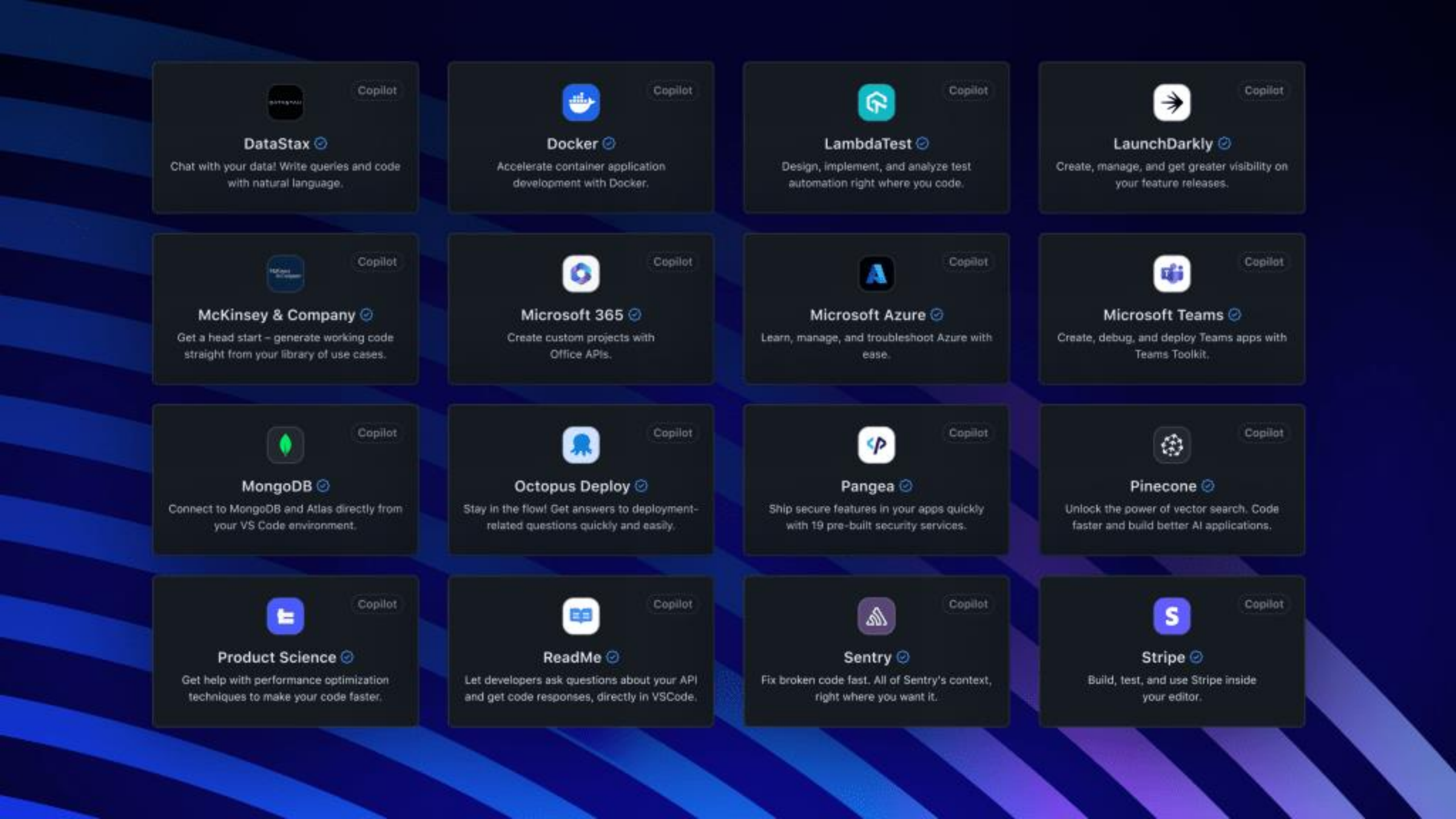
3 references

Is it OK

Technical Preview
GitHub Copilot
Workspace

GitHub Copilot for Azure


credential=credential,
)
system_prompt = "Using only
embedding = AzureOpenAIEmbe
azure_deployment=os.getenv("
openai_api_version=os.ge
)
persist_directory = "./data
vectordb = get_vectordb(emb
app = FastAPI()
@app.get("/quote")
async def random_quote():
try:
completion = client.Co
model="text-da
prompt="Give me
max_tokens=60
)
quote = completion.
return {"quote": qu
except Exception as e:
/fix the problems in my code
/tests write unit tests for my code
/explain how the selected code works
@azure What Azure Opt
main


Copilot
DataStax
Chat with your data! Write queries and code with natural language.
Copilot
Docker
Accelerate container application development with Docker.
Copilot
LambdaTest
Design, implement, and analyze test automation right where you code.
Copilot
LaunchDarkly
Create, manage, and get greater visibility on your feature releases.
Copilot
McKinsey & Company
Get a head start – generate working code straight from your library of use cases.
Copilot
Microsoft 365
Create custom projects with Office APIs.
Copilot
Microsoft Azure
Learn, manage, and troubleshoot Azure with ease.
Copilot
Microsoft Teams
Create, debug, and deploy Teams apps with Teams Toolkit.
Copilot
MongoDB
Connect to MongoDB and Atlas directly from your VS Code environment.
Copilot
Octopus Deploy
Stay in the flow! Get answers to deployment-related questions quickly and easily.
Copilot
Pangea
Ship secure features in your apps quickly with 19 pre-built security services.
Copilot
Pinecone
Unlock the power of vector search. Code faster and build better AI applications.
Copilot
Product Science
Get help with performance optimization techniques to make your code faster.
Copilot
ReadMe
Let developers ask questions about your API and get code responses, directly in VSCode.
Copilot
Sentry
Fix broken code fast. All of Sentry's context, right where you want it.
Copilot
Stripe
Build, test, and use Stripe inside your editor.

Microsoft Copilot for Azure

You need to do more, and you need it...

- Correct
- Performant
- Compliant
- Repeatable
- Safe
- Cost effective
- **Yesterday**

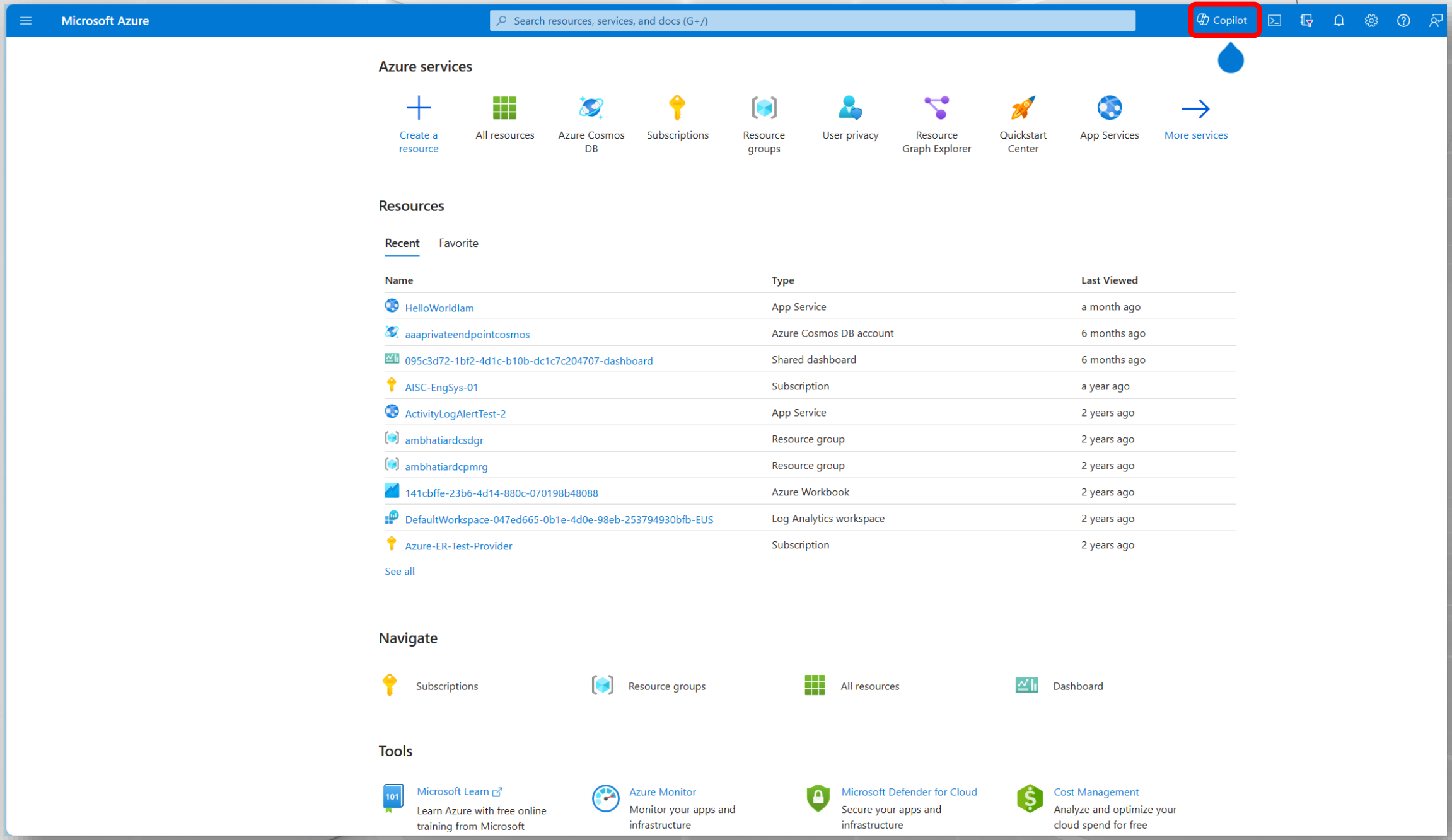
What can we build to help you do more?

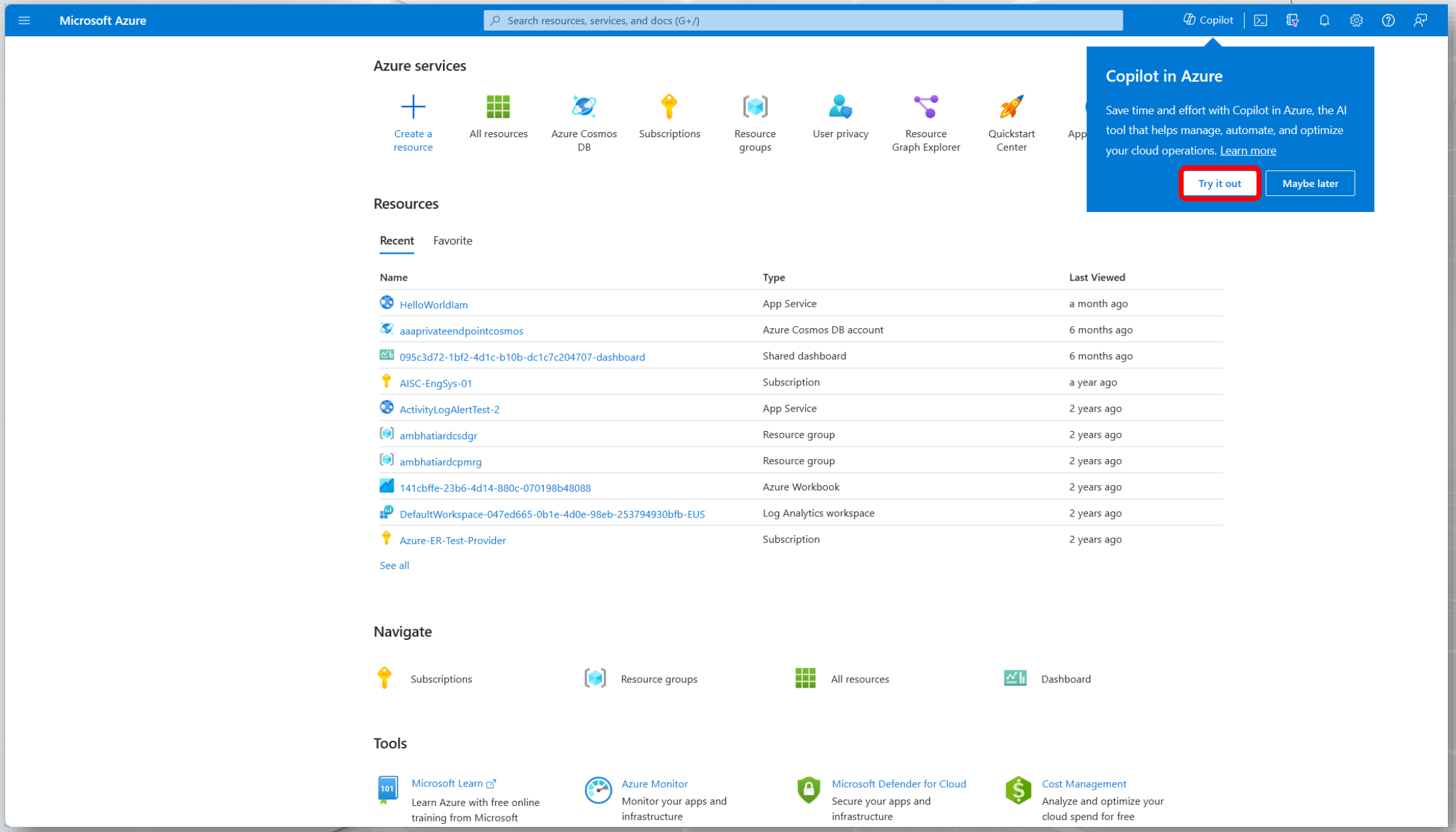
Customers want an assistant to help them…

1. Learn about Azure
2. Answer questions about their environment
3. Accelerate workload deployment
4. Recommend best services & capabilities
5. Automate low-risk tasks
6. Monitor & get insights about their environment
7. Troubleshooting, help & support
8. Optimize their environment

Microsoft Copilot for Azure Overview

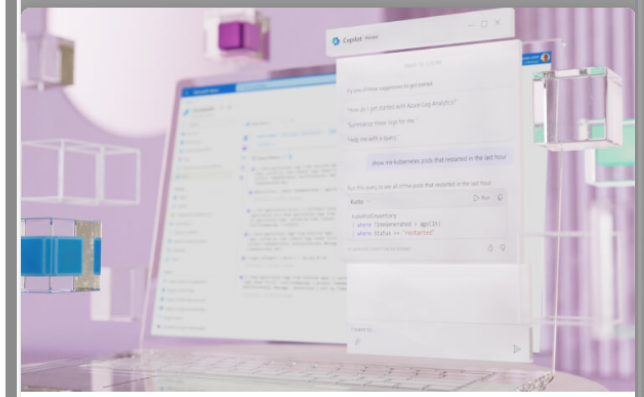
- Copilot for Azure helps you:
  - **Design**: create and configure the services needed while aligning with organizational policies
  - **Operate**: answer questions, author complex commands, and manage resources
  - **Troubleshoot**: orchestrate across Azure services for insights to summarize issues, identify causes, and suggest solutions
  - **Optimize**: improve costs, scalability, and reliability through recommendations for your environment


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Azure services
Create a resource
All resources
Azure Cosmos DB
Subscriptions
Resource groups
User privacy
Resource Graph Explorer
Quickstart Center
App Services
More services
Resources
Recent
Favorite
Name
Type
Last Viewed
HelloWorldIam
App Service
a month ago
aaaprivateendpointcosmos
Azure Cosmos DB account
6 months ago
095c3d72-1bf2-4d1c-b10b-dc1c7c204707-dashboard
Shared dashboard
6 months ago
AISC-EngSys-01
Subscription
a year ago
ActivityLogAlertTest-2
App Service
2 years ago
ambhatiardcsdgr
Resource group
2 years ago
ambhatiardcpmrg
Resource group
2 years ago
141cbffe-23b6-4d14-880c-070198b48088
Azure Workbook
2 years ago
DefaultWorkspace-047ed665-0b1e-4d0e-98eb-253794930bfb-EUS
Log Analytics workspace
2 years ago
Azure-ER-Test-Provider
Subscription
2 years ago
See all
Navigate
Subscriptions
Resource groups
All resources
Dashboard
Tools
Microsoft Learn
Learn Azure with free online training from Microsoft
Azure Monitor
Monitor your apps and infrastructure
Microsoft Defender for Cloud
Secure your apps and infrastructure
Cost Management
Analyze and optimize your cloud spend for free


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Azure services
Create a resource
All resources
Azure Cosmos DB
Subscriptions
Resource groups
User privacy
Resource Graph Explorer
Quickstart Center
Copilot in Azure
Save time and effort with Copilot in Azure, the AI tool that helps manage, automate, and optimize your cloud operations. Learn more
Try it out
Maybe later
Resources
Recent
Favorite
Name
Type
Last Viewed
HelloWorldIam
App Service
a month ago
aaaprivateendpointcosmos
Azure Cosmos DB account
6 months ago
095c3d72-1bf2-4d1c-b10b-dc1c7c204707-dashboard
Shared dashboard
6 months ago
AISC-EngSys-01
Subscription
a year ago
ActivityLogAlertTest-2
App Service
2 years ago
ambhatiardcsdgr
Resource group
2 years ago
ambhatiardcpmrg
Resource group
2 years ago
141cbffe-23b6-4d14-880c-070198b48088
Azure Workbook
2 years ago
DefaultWorkspace-047ed665-0b1e-4d0e-98eb-253794930bfb-EUS
Log Analytics workspace
2 years ago
Azure-ER-Test-Provider
Subscription
2 years ago
See all
Navigate
Subscriptions
Resource groups
All resources
Dashboard
Tools
Microsoft Learn
Learn Azure with free online training from Microsoft
Azure Monitor
Monitor your apps and infrastructure
Microsoft Defender for Cloud
Secure your apps and infrastructure
Cost Management
Analyze and optimize your cloud spend for free

Copilot
Preview

Hello Santhosh, how can I help?



Discover Copilot, a whole new way to work

Explore new ways to work smarter and faster using the power of AI. Copilot in Azure can help you answer questions using the latest Azure documentation, perform basic management operations for your environment, find the best services and capabilities for your workload, and more.

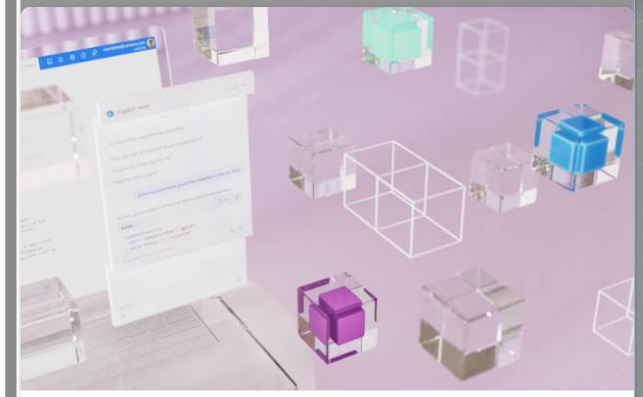
Not Now | Next

I want to ...

0 / 500

Copilot
Preview

Hello Santhosh, how can I help?



A few more things about Copilot

Copilot knows about your roles, resources, policies, and much more. But Copilot has limits. Any action you would like to take on more than 5 resources must be performed outside of Copilot. While in private preview you can only make 10 requests during any given chat and you only have 5 chats in a 24 hour period.

Previous | Next

I want to ...

0 / 500

Copilot
Preview

Hello Santhosh, how can I help?

It's always good to verify answers

AI-generated content can contain mistakes. Make sure it's accurate and appropriate before using it.

Terms | Privacy

Previous | Try Copilot

I want to ...

0 / 500

Troubleshoot your apps faster with App Service

- My web app is down
- My web app is slow
- Enable auto heal
- Take a memory dump

Understand service health events and status

- Am I impacted by any service health events?
- Is there any outage impacting me?
- Can you tell me more about this tracking ID {0}?
- Is the event with tracking ID {0} still active?
- What is the status of the event with tracking ID {0}

Generate Azure CLI scripts

- I want to create a virtual machine using Azure CLI
- I want to use Azure CLI to deploy and manage AKS using a private service endpoint
- I want to create a web app using Azure CLI

Author API Management policies

- Generate a policy to configure rate limiting with 5 requests per second
- Generate a policy to remove a 'X-AspNet-Version' header from the response
- Explain (selected policy or element) to me

Get information about Azure Monitor logs

- Are there any errors in container logs?
- Show logs for the last day of pod <provide_pod_name> under namespace <provide_namespace>
- Show me container logs that include word 'error' for the last day for namespace 'xyz'
- Check in logs which containers keep restarting
- Show me all Kubernetes events

Generate Kubernetes YAML files

- Help me generate a Kubernetes YAML file for a frontend service using port 8080
- Give me an example YAML manifest for a CronJob that runs every day at midnight and calls a container named nightlyjob
- Generate a Kubernetes Deployment YAML file for a web application named 'my-web-app'. It should run three replicas and expose port 80
- Generate a Kubernetes Ingress YAML file that routes traffic to my frontend and backend services based on hostnames

Microsoft

Demo

Azure services

Create a resource
Kubernetes services
Quickstart Center
Virtual machines
App Services
Storage accounts
SQL databases
Azure Cosmos DB
Function App
More services

Resources

Recent | Favorite

Name	Type

No resources have been favorited

Favorite resources to quickly navigate to them from the home page.

Select resources to favorite

Navigate

- Subscriptions
- Resource groups
- All resources
- Dashboard

Tools

Microsoft Learn
Learn Azure with free online training from Microsoft

Azure Monitor
Monitor your apps and infrastructure

Microsoft Defender for Cloud
Secure your apps and infrastructure

Cost Management
Analyze and optimize your cloud spend for free

Useful links

Technical Documentation
Azure Migration Tools
Azure Services
Find an Azure expert
Recent Azure Updates
Quickstart Center

Azure mobile app

Download on the App Store
GET IT ON Google Play

Augmentation Loop-AzureProfiler

Application Insights

Search

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems

Investigate
Application map
Smart detection
Live metrics
Transaction search
Availability
Failures
Performance
Troubleshooting guides (preview)

Monitoring
Alerts
Metrics
Logs
Workbooks

Application Dashboard | Getting started | Search | Logs | Monitor resource group

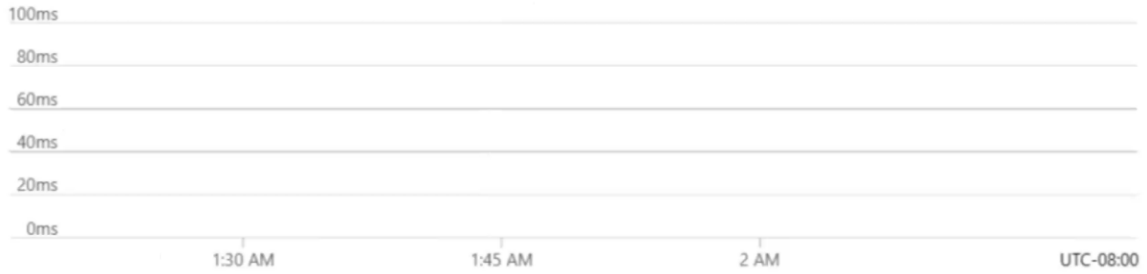
Show data for last:

30 minutes | 1 hour | 6 hours | 12 hours | 1 day | 3 days | 7 days | 30 days

Failed requests

Failed requests (Count)
augmentation loop-azureprofiler
0

Server response time



Server response time (Avg)
augmentation loop-azureprofiler
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Server requests

Copilot

Preview

Hello Cameron, how can I help?

I want to ...

0 / 500

Current Limitations

- Any action taken on more than 10 resources must be performed outside of Microsoft Copilot in Azure.
- You can only make 15 requests during any given chat, and you only have 10 chats in a 24 hour period.
- Some responses that display lists will be limited to the top five items.
- For some tasks and queries, using a resource's name will not work, and the Azure resource ID must be provided.
- Microsoft Copilot in Azure is currently available in English only.

Thank You!