

Creating Applications that can See, Hear, Speak and Understand Using Azure Cognitive Services

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**"Azure Cognitive Services can
help me build Intelligent
Applications"**

“I can **customize** some
services to build bespoke
applications”

“Intelligence is powerful
when it’s a full solution”

Azure Cognitive Services

Creating applications that can see, hear, speak and understand



Build it Yourself

<https://aka.ms/ai-nights-beginner>

Customized language understanding **Text-to-speech**
Content moderation **Spell**
Speech translation check
Custom image classification
Speaker recognition Entity linking
Sentiment analysis, & augmentation
key phrase extraction **Image tagging**
Custom Object detection Text translation Intend
voice **OCR handwriting** analysis
Emotion detection
Video insights **recognition** Custom translation
Face Custom speech Assisted text moderation
identification Speech transcription

AI



Vision



Speech



Language

Azure AI



AI apps & agents

Azure Bot Service
Azure Cognitive Services



Knowledge mining

Azure Cognitive Search



Machine learning

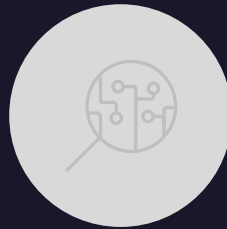
Azure Databricks
Azure Machine Learning
Azure AI Infrastructure

Azure AI



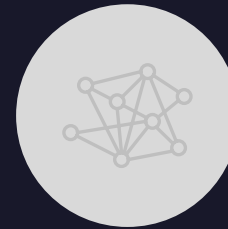
AI apps & agents

Azure Bot Service
Azure Cognitive Services



Knowledge mining

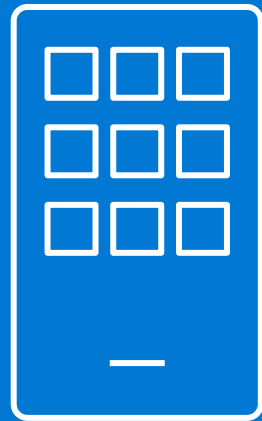
Azure Cognitive Search



Machine learning

Azure Databricks
Azure Machine Learning
Azure AI Infrastructure

Building AI apps & agents



Your apps



Vision



Speech

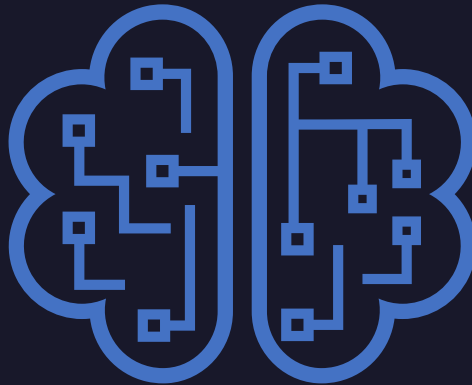


Language

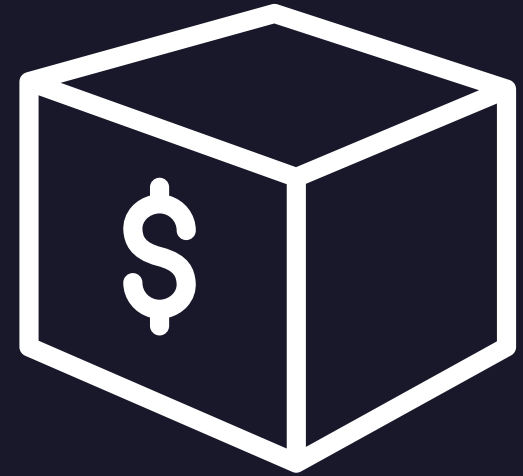
Option 1



idea



prebuilt AI



reality

Microsoft Cognitive Services

Give your apps a human side



Vision

From faces to feelings, allow your apps to understand images and video



Speech

Hear and speak to your users by filtering noise, identifying speakers, and understanding intent



Language

Process text and learn how to recognize what users want



Knowledge

Map complex information and data in order to solve specific tasks



Search

Access billions of web pages, images, videos, and news with the power of Bing



Labs

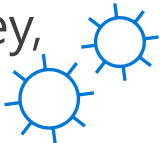
An early look at emerging Cognitive Services technologies: discover, try, and give feedback on new technologies before general availability

Why Microsoft Cognitive Services?

Easy

Roll your own with REST APIs

Simple to add: just a few lines of code required

Get a key,
Build 

Flexible

Integrate into the language and platform of your choice

Breadth of offerings helps you find the right services for your app

Bring your own data for your custom experience



Tested

Built by experts in their field from Microsoft Research, Bing, and Azure Machine Learning

Quality documentation, sample code, and community support

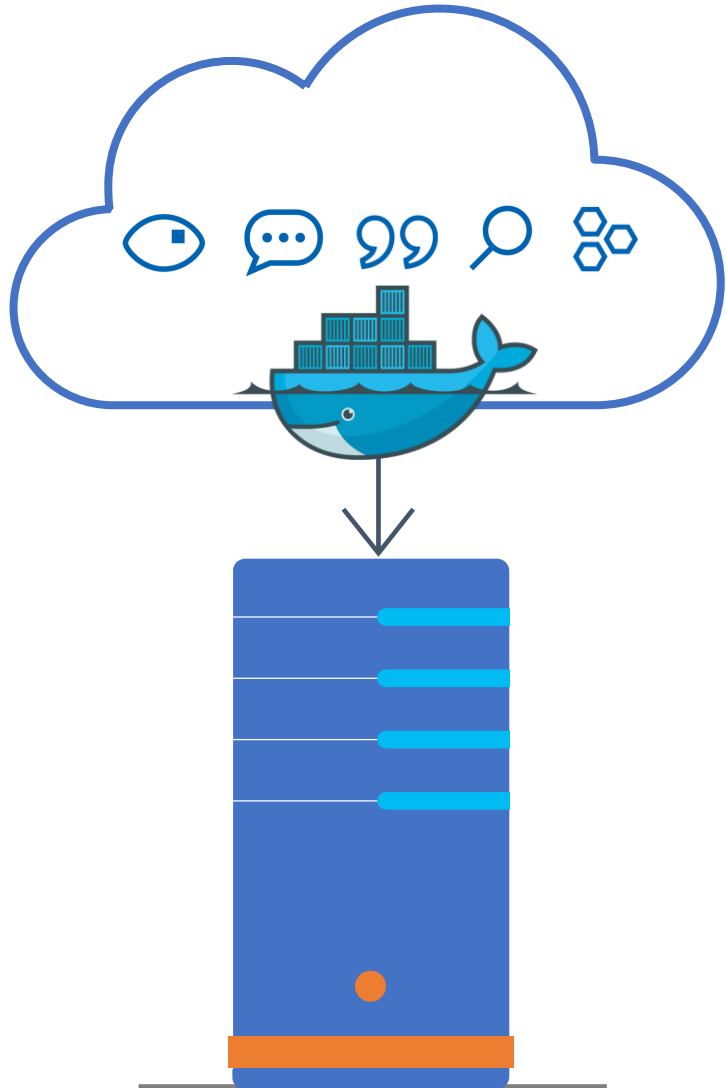


Demo

Azure Cognitive Services

<https://aka.ms/ai-nights-beginner>

Cognitive Services Containers



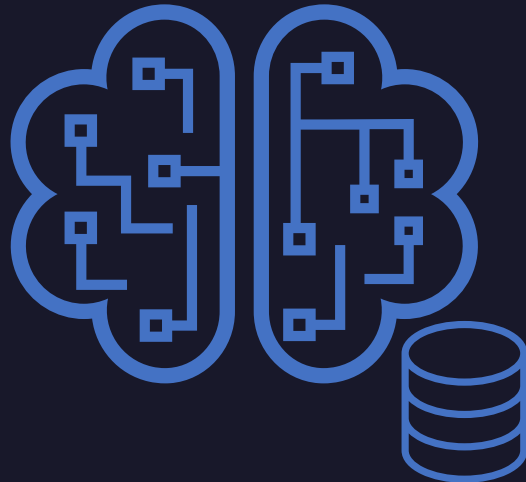
Now In Public Preview

- No app changes & Compatible with full Cognitive Services feature-set
- Support for 6 key AI capabilities:
 - Key Phrase Extraction
 - Language Detection
 - Sentiment Analysis
 - Face & Emotion Detection
 - OCR / Text Recognition
 - Language Understanding
- Run & manage locally, Try for free
- Connect to Billing service for report back, unified billing with on-cloud and off-cloud transactions
- Additional Capabilities coming soon (e.g. Speech)

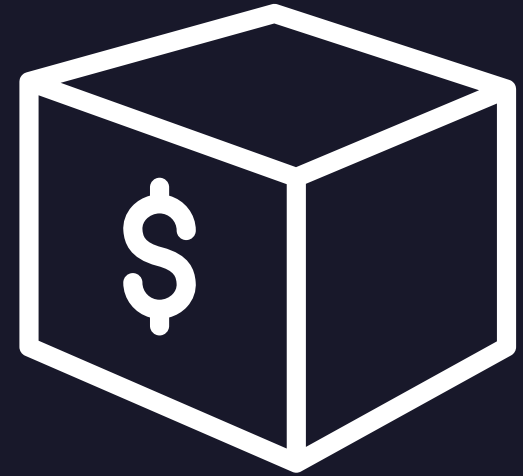
Option 2



idea



customize
prebuilt AI



reality

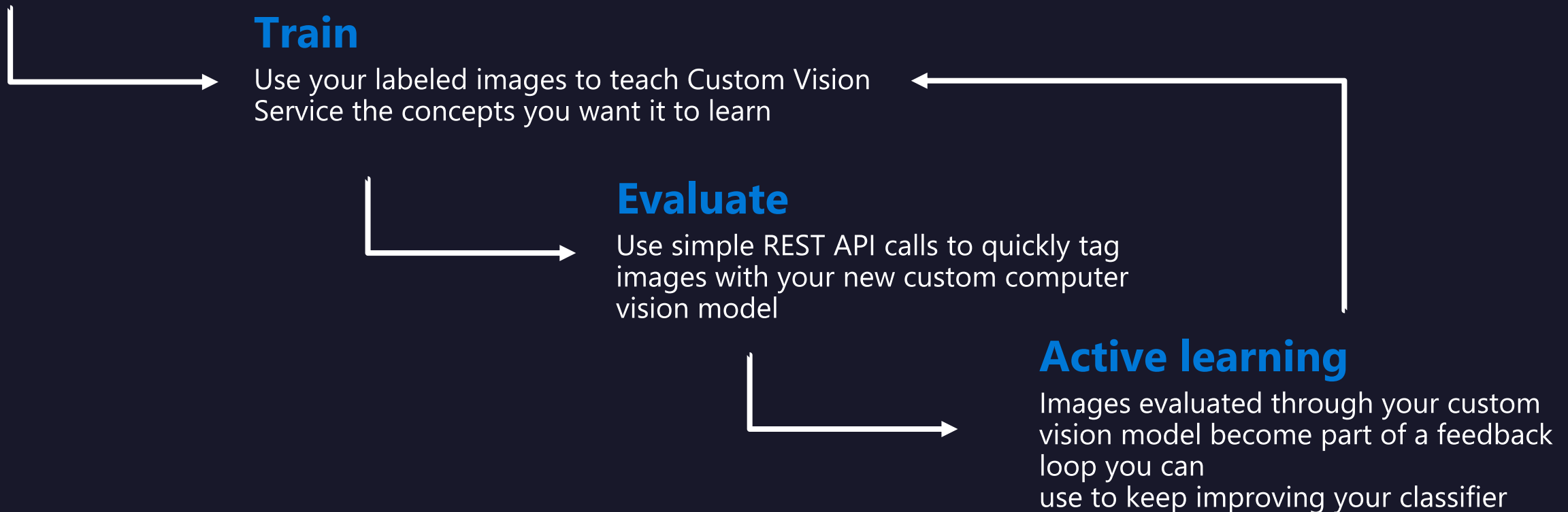
Custom Vision

A customizable web service that learns to recognize specific content in imagery

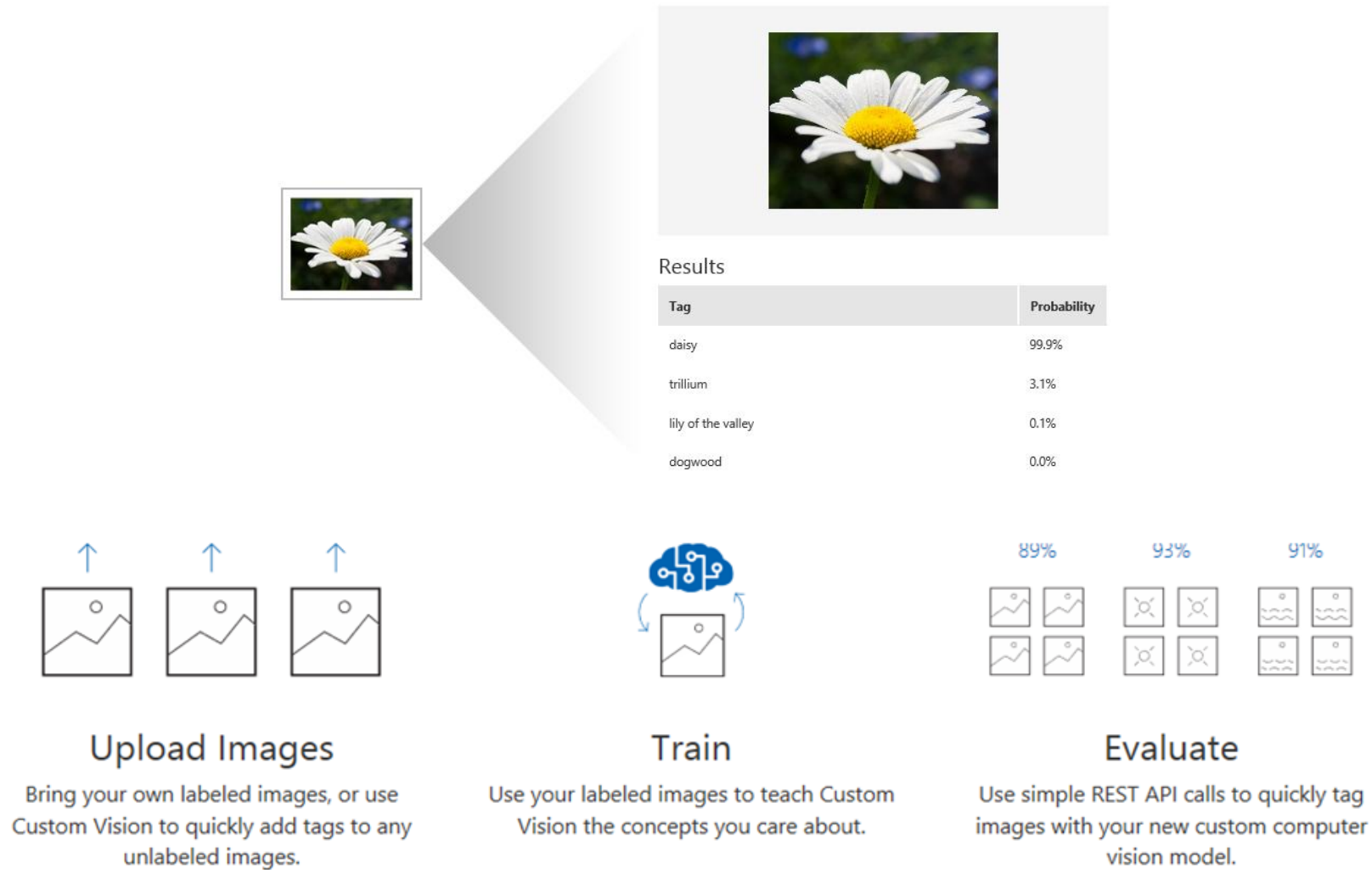


Upload images

Upload your own labeled images, or use Custom Vision Service to quickly tag any unlabeled images



Custom Vision



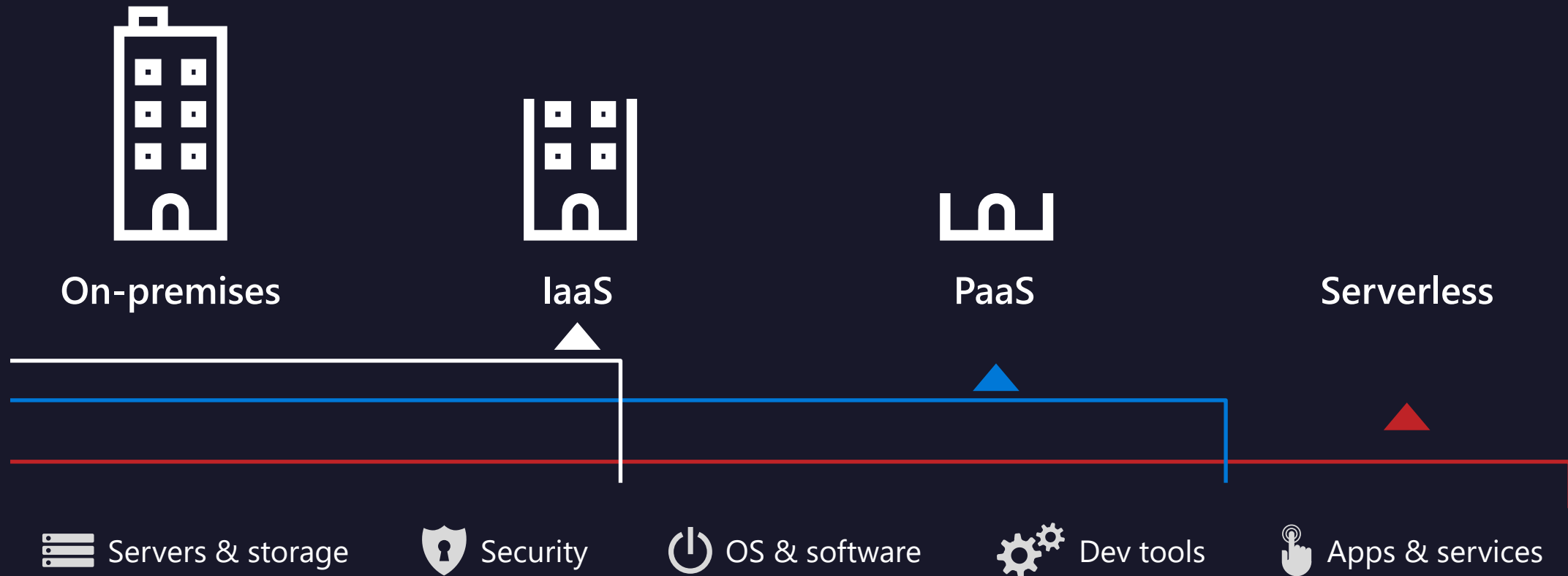
Demo

Azure Custom Vision

<https://aka.ms/ai-nights-beginner>

History of cloud development

Increasingly advanced cloud technologies have led companies to entrust more and more of their IT activities to service providers



What is serverless?



Full abstraction of servers

Developers can just focus on their code—there are no distractions around server management, capacity planning, or availability.



Instant, event-driven scalability

Application components react to events and triggers in near real-time with virtually unlimited scalability; compute resources are used as needed.



Pay-per-use

Only pay for what you use: billing is typically calculated on the number of function calls, code execution time, and memory used.*

*Supporting services, like storage and networking, may be charged separately.

Azure Serverless Ecosystem

Development

 IDE support

 Integrated DevOps

 Local development

 Monitoring

 Visual debug history

Platform

 Event Grid

Manage all events that can trigger code or logic

 Functions

Execute your code based on events you specify

 Logic Apps

Design workflows and orchestrate processes

Database



Storage



Analytics



Intelligence



Security



IoT



Demo

Custom Vision and Logic Apps

<https://aka.ms/ai-nights-beginner>

Azure Cognitive Services

- Azure Cognitive Services can help me build intelligent applications
- I can customize some services to build bespoke applications
- Intelligence is powerful when it's a full solution

Azure Cognitive Services

- **Azure Cognitive Services Documentation:**
<https://aka.ms/gaib-cognitive>
- **Azure Custom Vision Service:**
<https://aka.ms/gaib-customvision>
- **Azure Logic Apps Documentation:**
<https://aka.ms/gaib-logicapps>

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