

AI on Azure, What's new? Has AITaiar



```

1 import csv
2
3 if __name__ == "__main__":
4
5     with open('data.csv', 'rb') as f:
6         reader = csv.reader(f)
7         data_as_list = list(reader)
8
9     data_as_list.

```

★ append	list.append(self, value)	×
★ extend		
★ pop	L.append(object) -- append object to end	
★ sort		
★ insert		
count		
index		
remove		
reverse		
__add__		
__base__		
__bases__		

<https://visualstudio.microsoft.com/services/intellicode/>

Does AI poetry do it for you?

ENGLISH

The rain is blowing through the sea
A bird in the sky
A night of light and calm
Sunlight
Now in the sky
Cool heart
The savage north wind
When I found a new world

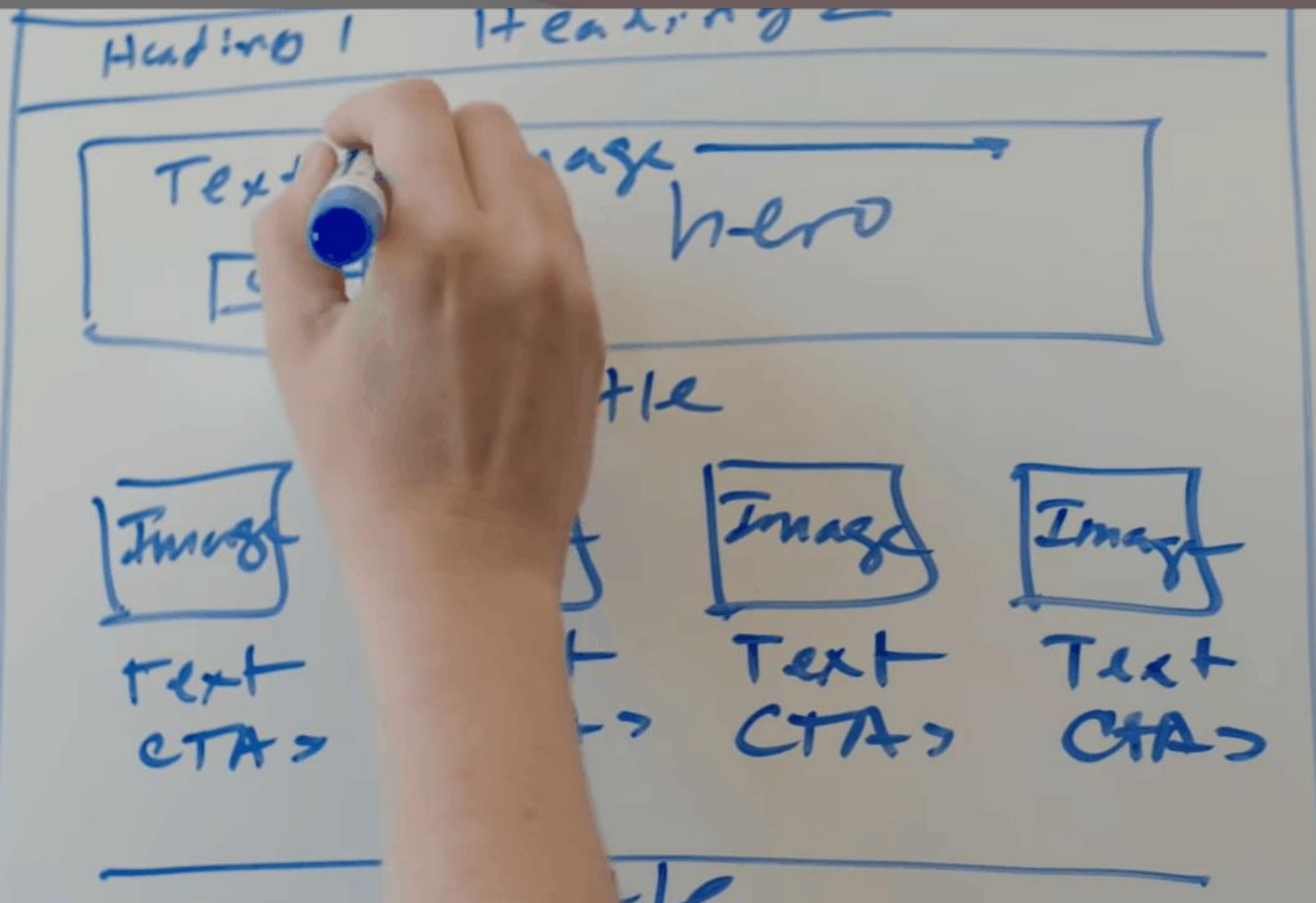
CHINESE

雨过海风一阵阵
撒向天空的小鸟
光明冷静的夜
太阳光明
现在的天空中去
冷静的心头
野蛮的北风起
当我发现一个新的世界

Translated to English using Microsoft's Bing Translator

SCMP

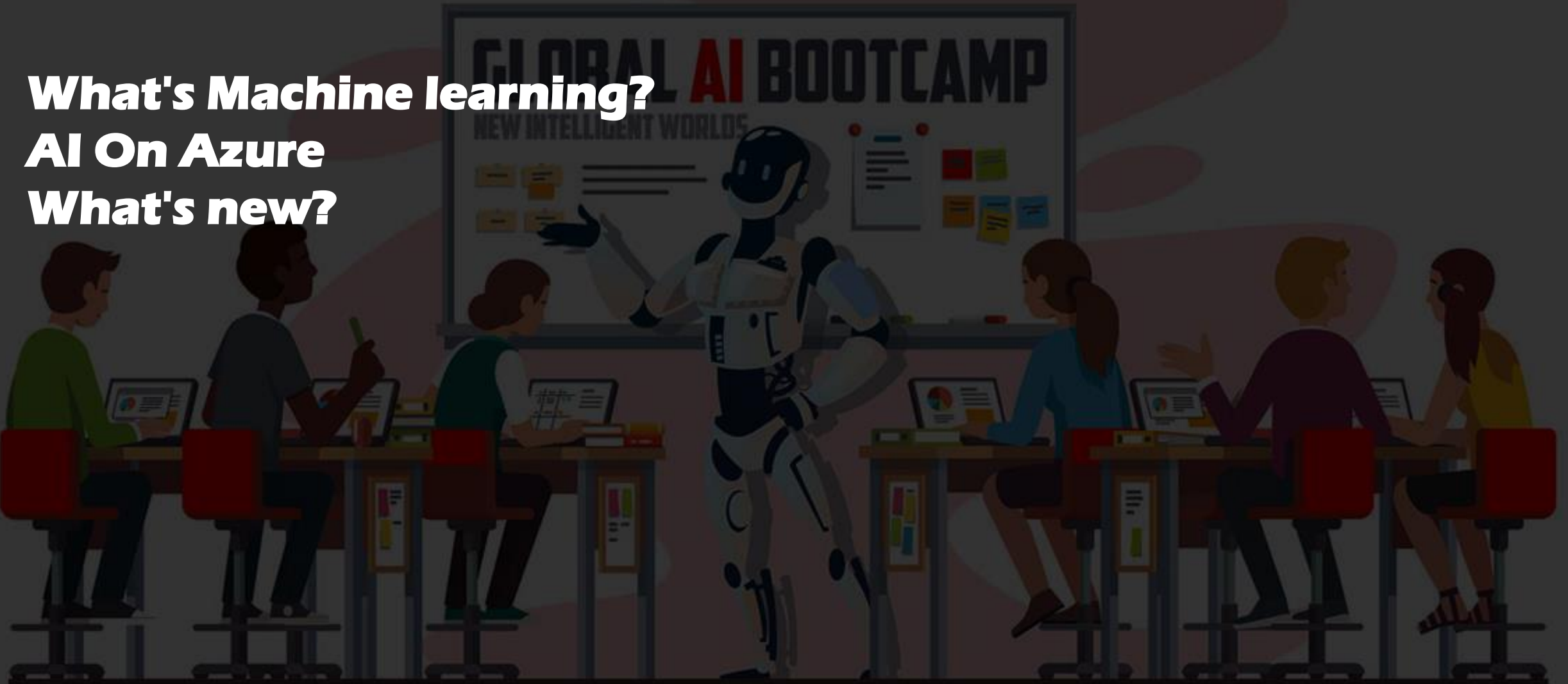
<https://www.scmp.com/news/china/society/article/2097044/microsofts-ai-bot-has-published-book-poems-china-it-worth-reading>



What's Machine learning?

AI On Azure

What's new?



Machine Learning

"Programming the UnProgrammable"

Is this a face?



Price of Shirt?

"It has **exquisite** buttons ...
with **long sleeves** ...works for
casual as well as **business**
settings"

Machine Learning

"Programming the UnProgrammable"

Machine Learning creates a

$f(x)$

Model

Using this data



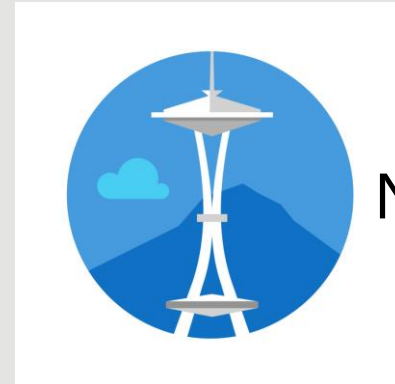
Face



Face



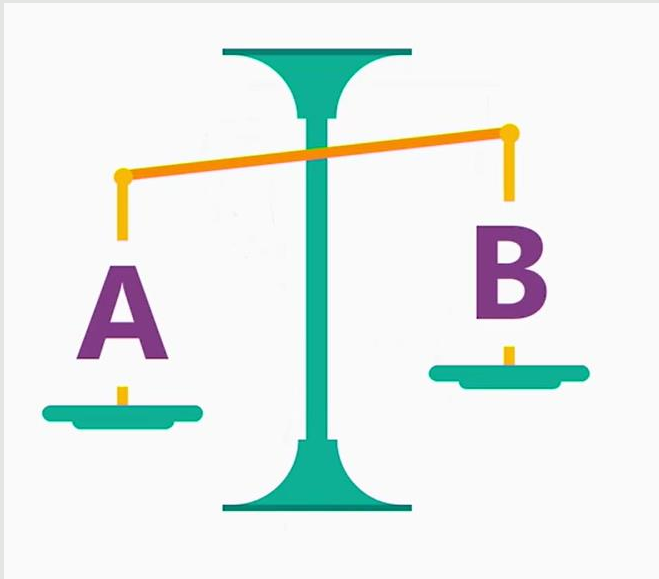
Not a face



Not a face

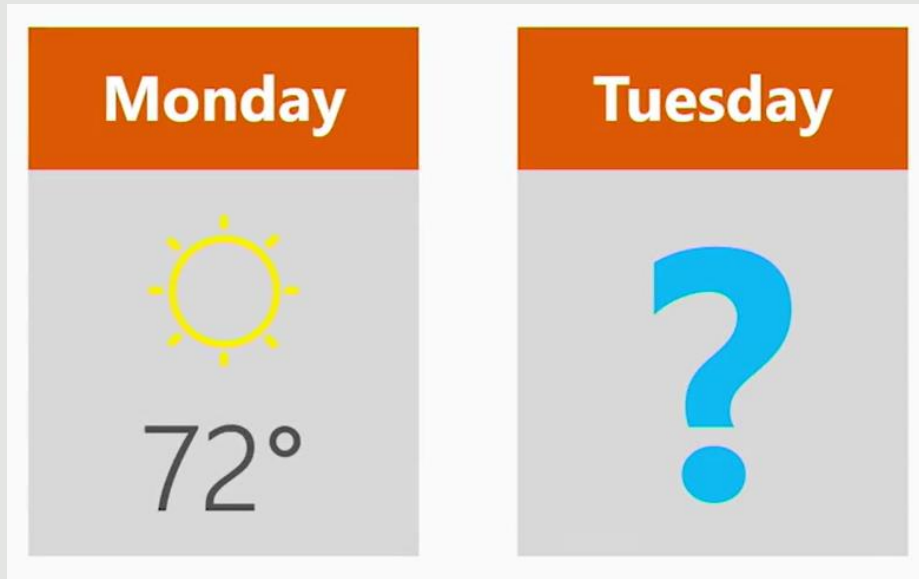
Many ML Tasks...

Is this A or B?



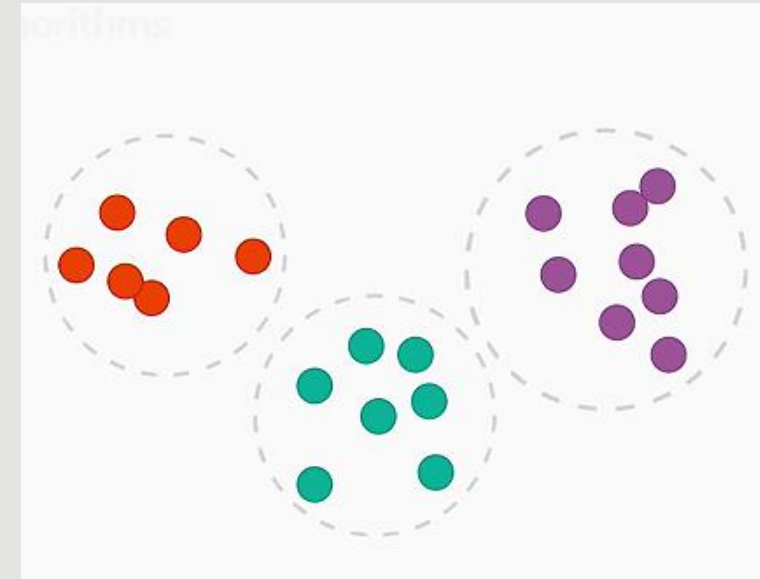
Classification

How much? How many?



Regression

How is this organized?



Clustering

Machine Learning Process

SQL DB

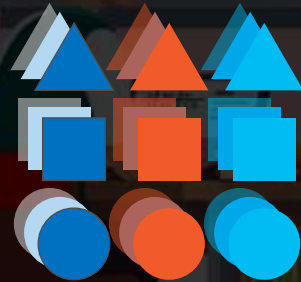
Cosmos DB

Datawarehouse

Data lake

Blob storage

...



Prepare Data



Build & Train



Deploy

AI On Azure



<http://azureaibootcamp.me>

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AI On Azure

Tools

VS Code Tools for AI
Azure Machine Learning
Machine Learning Packages
AI Toolkit for IoT Edge

Frameworks

Tensorflow
Onnx
ML.Net
Others

Infrastructure

DataBricks
Azure Kubernetes
Azure Batch AI
Data Science VM
IoT Edge

Pre-Built Services



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Azure Cognitive Services

Powerful prebuilt AI models exposed as API services

Process images, video, speech, language and more

Simple REST APIs with .NET, Java, Python, Node SDKs

Deploy to the edge or on premises with container support



Vision



Speech



Language



Conversation



Bing Search



Knowledge

Azure Machine Learning Service

ONNX Runtime is now open source

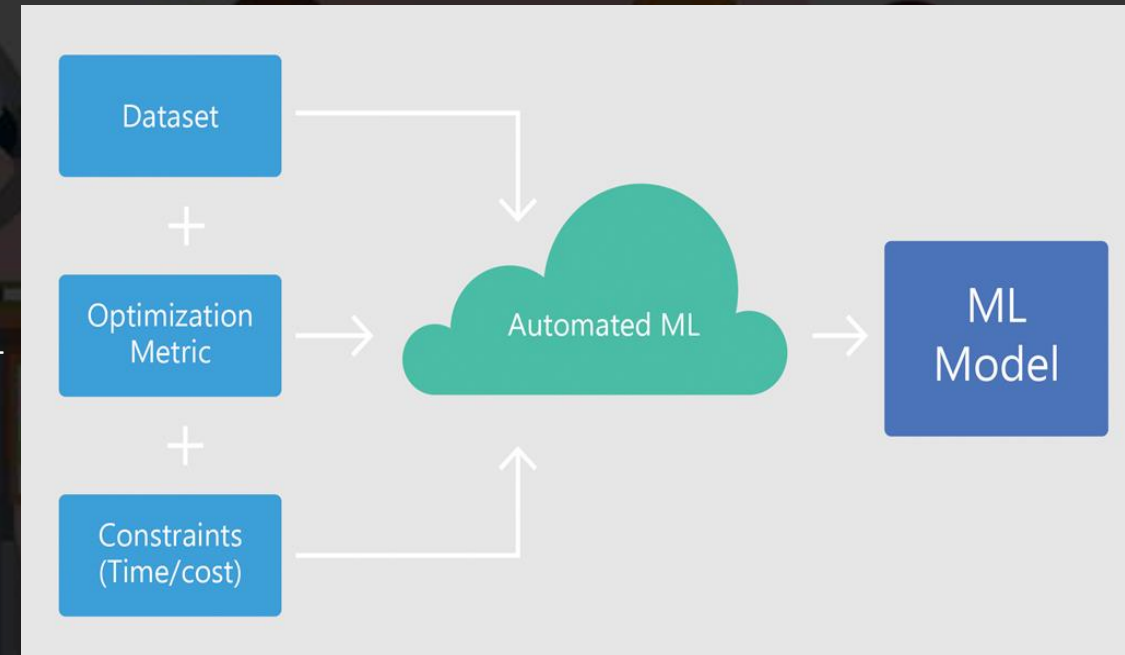
<https://azure.microsoft.com/en-us/blog/onnx-runtime-is-now-open-source/>

Azure Machine learning Services goes GA

<https://azure.microsoft.com/en-us/blog/azure-machine-learning-service-a-look-under-the-hood/>

Azure Machine Learning – Auto ML

<https://azure.microsoft.com/en-au/blog/announcing-automated-ml-capability-in-azure-machine-learning/>



Azure Cognitive Services

Azure Cognitive Services on the Edge

<https://azure.microsoft.com/en-us/blog/bringing-ai-to-the-edge/>

Custom Translation capability of Text Translator

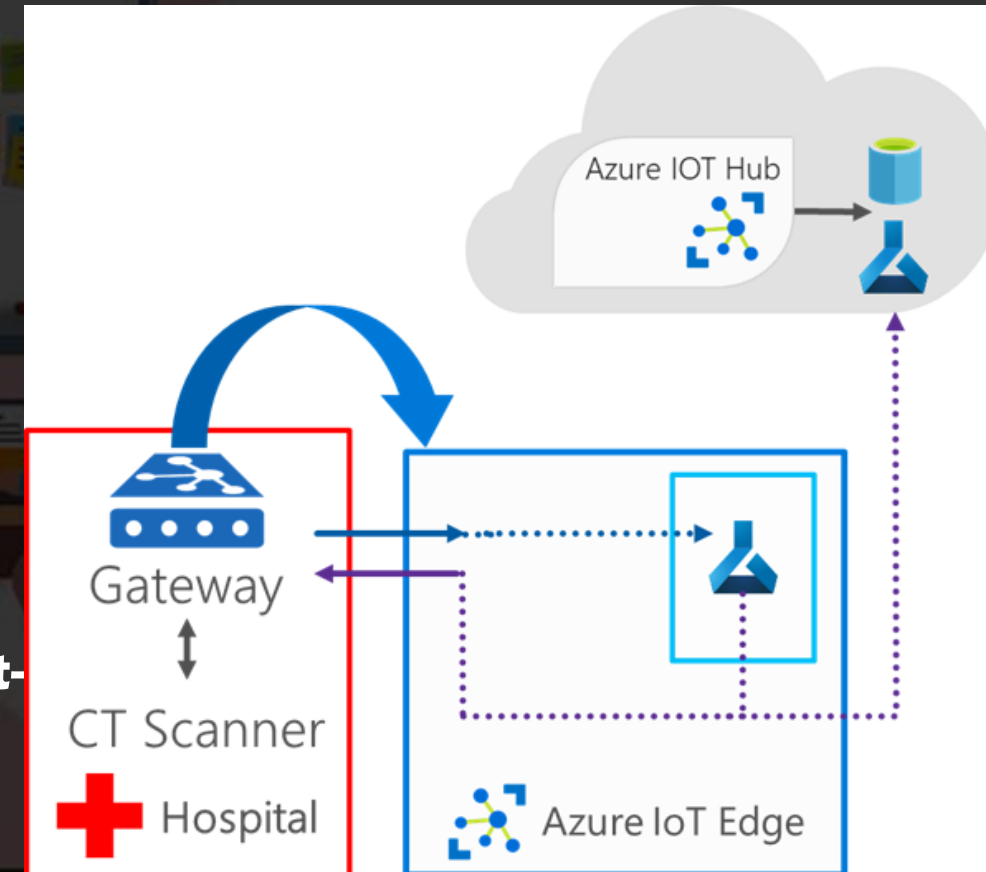
<https://azure.microsoft.com/en-au/updates/custom-translation-capability-of-text-translator-is-now-available/>

Public Preview – Container Support for Language Understanding Cognitive Service

<https://azure.microsoft.com/en-au/updates/container-support-for-language-understanding-is-in-preview/>

Public Preview -Microsoft previews neural network text-to-speech

<https://azure.microsoft.com/en-us/blog/microsoft-previews-neural-network-text-to-speech/>



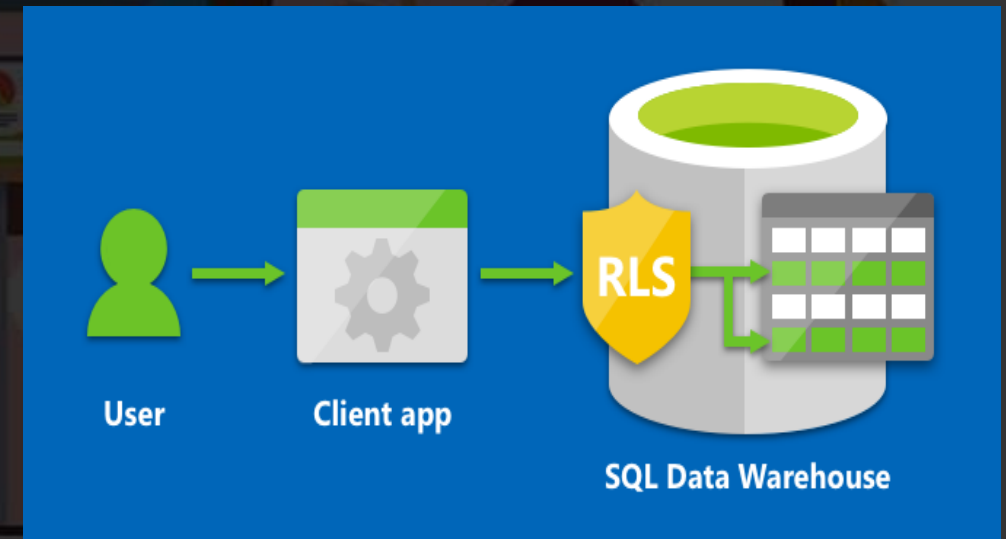
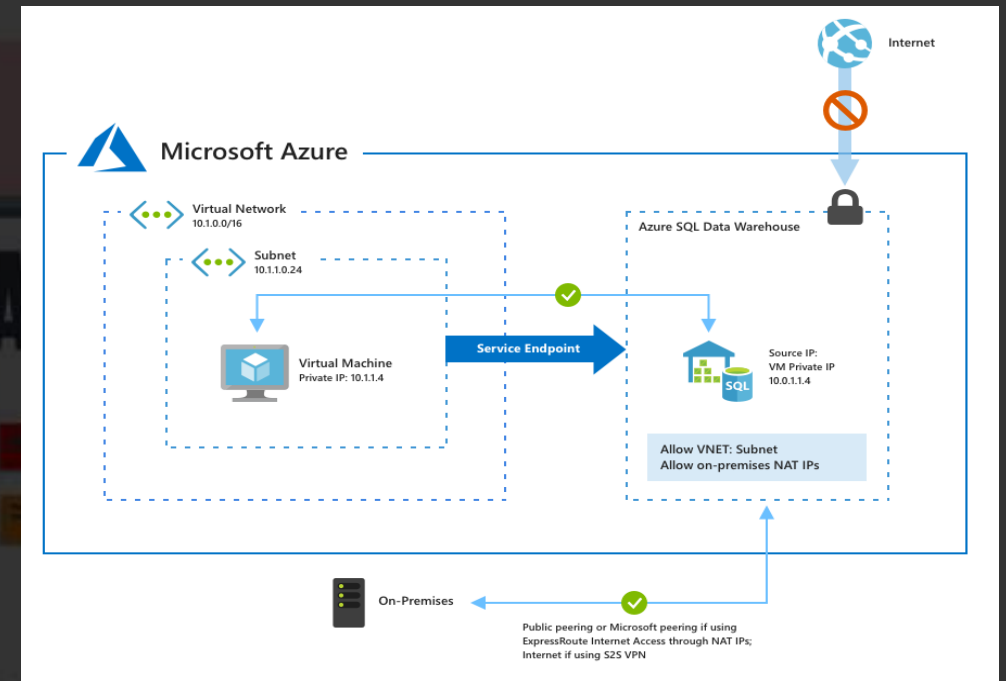
Storage & Databases

GA of VNet support for Azure SQL DW

<https://azure.microsoft.com/en-us/blog/general-availability-of-vnet-service-endpoints-for-azure-sql-data-warehouse/>

GA of Row-Level Security support for Azure SQL DW

<https://azure.microsoft.com/en-us/blog/row-level-security-is-now-supported-for-azure-sql-data-warehouse/>



IoT & Advanced Analytics

Azure Stream Analytics on IoT Edge goes GA

<https://azure.microsoft.com/en-au/updates/azure-stream-analytics-on-iot-edge-generally-available/>

New capabilities on Azure Time Series Insight

<https://azure.microsoft.com/en-au/updates/new-key-capabilities-added-to-time-series-insights/>

Azure IoT Solution Accelerators are updated

<https://azure.microsoft.com/en-us/blog/azure-iot-remote-monitoring-extends-operator-capabilities-to-the-edge/>

GA of Azure Event Hubs for Apache Kafka

<https://azure.microsoft.com/en-us/blog/announcing-the-general-availability-of-azure-event-hubs-for-apache-kafka>

Big Data

Better Python Support for Azure Functions

<https://azure.microsoft.com/en-us/blog/azure-functions-gets-better-for-python-and-javascript-developers/>

Azure Functions now supported as a step in Azure Data Factory pipelines

<https://azure.microsoft.com/en-us/blog/azure-functions-now-supported-as-a-step-in-azure-data-factory-pipelines/>

Azure HDInsight integration with Data Lake Storage Gen2 preview

<https://azure.microsoft.com/en-us/blog/azure-hdinsight-integration-with-data-lake-storage-gen-2-preview-acl-and-security-update/>

Azure Data Lake Storage Gen2 preview – More features, and better performance

<https://azure.microsoft.com/en-us/blog/azure-data-lake-storage-gen2-preview-more-features-more-performance-better-availability/>

Azure AI Gallery

<https://gallery.azure.ai>



EXPERIMENT

Prediction of Blood Donation

Based on history of blood donated, predict if donor will donate or not. Maximum possible efficiency tried to achieve in a small dataset.

Two-Class Decision Forest

63 58

5 days ago

AT Aditya TS



EXPERIMENT

Credit Risk Experiment

Credit risk prediction from customer credit application data

Two-Class Boosted Decision Tree, Two-Class Support Vector Machine

8 3

yesterday

HH haliza husna



EXPERIMENT

Sentiment Analysis for Academic Emotions using Mouse Moveme...

This experiment attempts to predict academic emotions of children based on their mouse movement.

Linear Regression, Two-Class Support Vector Machine

19 17

2 days ago

RM Richmond Manga



EXPERIMENT

Rain Prediction

Predicting through Classification Algos whether it has rained or not in a given hourly slot.

Two-Class Boosted Decision Tree, Two-Class Decision Forest

0 0

2 days ago

MM Marco Mambelli

<http://azureaibootcamp.me>

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Additional Learning Resources

An illustration of a classroom setting. A robot teacher stands in the center, gesturing towards a whiteboard. The whiteboard has the text 'GLOBAL AI BOOTCAMP' and 'NEW INTELLIGENT WORLDS' on it, along with some sticky notes. Several students are seated at desks, working on laptops. The background is dark with some abstract shapes.

Microsoft Learn

<https://docs.microsoft.com/en-us/learn/>

AI School

<https://aischool.microsoft.com/>

IoT School

<https://iotschool.microsoft.com/>

FREE eBook – Developer's Guide to Building AI Applications

<https://info.microsoft.com/ww-landing-ai-developers-bot-ebook.html>

<http://azureaibootcamp.me>

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Questions?

