Create personalized experiences using the Azure Personalizer service

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Virtual Azure Community Day

About me.

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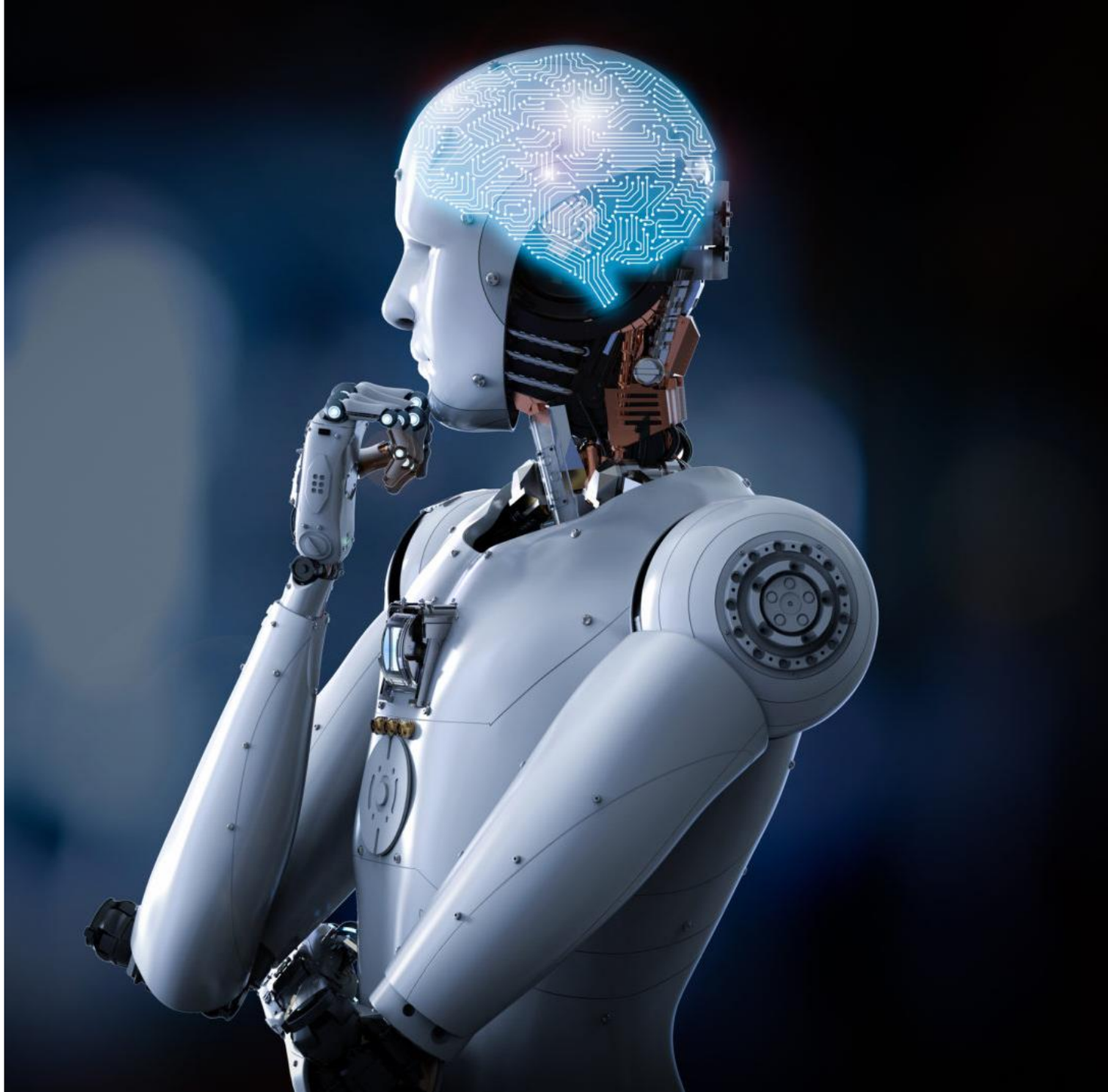
Agenda

- What is AI and Machine Learning?
- What are Cognitive Services?
- What is the Personalizer service?
- Features
- Live Demo
- QnA

Definition

- Artificial Intelligence is technology that appears to emulate human performance typically by learning, coming to it's own conclusions, appearing to understand complex content, engaging in natural dialogs with people, enhancing human cognitive performance or replacing or supporting people on execution of tasks.



Artificial Intelligence

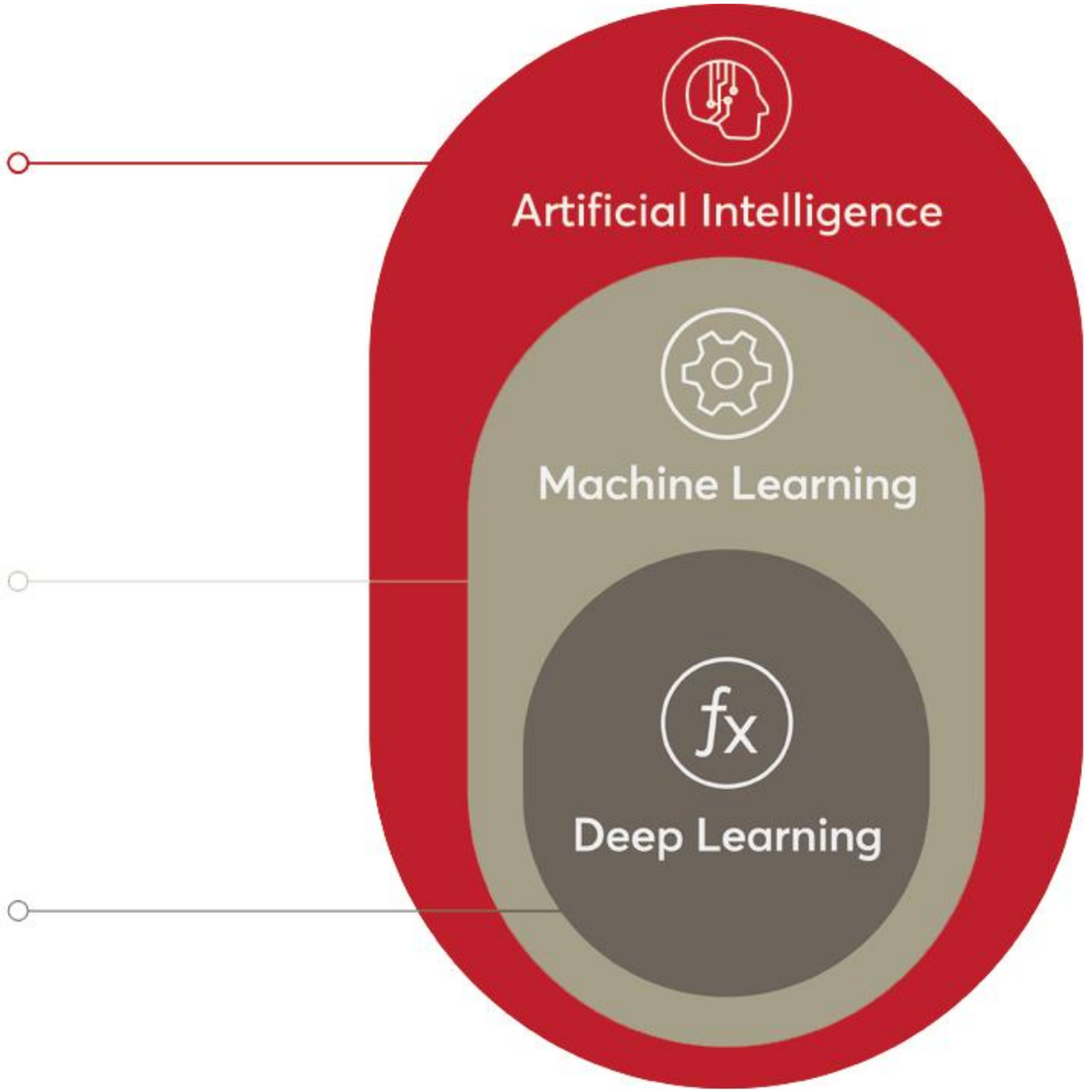
Any technique which enables computers to mimic human behavior

Machine Learning

Subset of AI techniques which use Statistical methods to enable machines to improve with experiences

Deep Learning

Subset of ML which makes the computation of multi-layer neural networks feasible



Machine Learning.

Machine Learning
"Programming the UnProgrammable"

Machine Learning creates a

$f(x)$

Model

using this data

Face

Face

Not a face

Not a face

Machine Learning Types

#1

Supervised learning

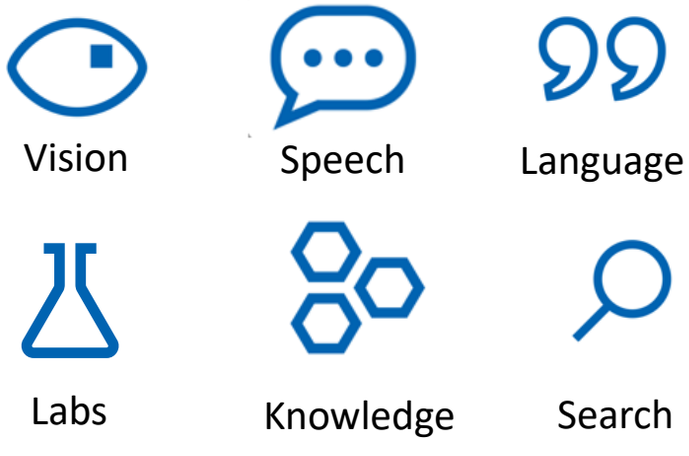
#2

Unsupervised learning

#3

Reinforcement Learning

Pre-built machine learning models (i.e. Azure Cognitive Services)



e.g. Sentiment Analysis using Azure Cognitive Services

```
TextAnalyticsAPI client = new TextAnalyticsAPI();
client.AzureRegion = AzureRegions.Westus;
client.SubscriptionKey = "1bf33391DeadFish";

client.Sentiment(
new MultiLanguageBatchInput(
new List<MultiLanguageInput>()
{
 new MultiLanguageInput("en","0",
     "This is a great vacuum cleaner")
}));
```

96% positive

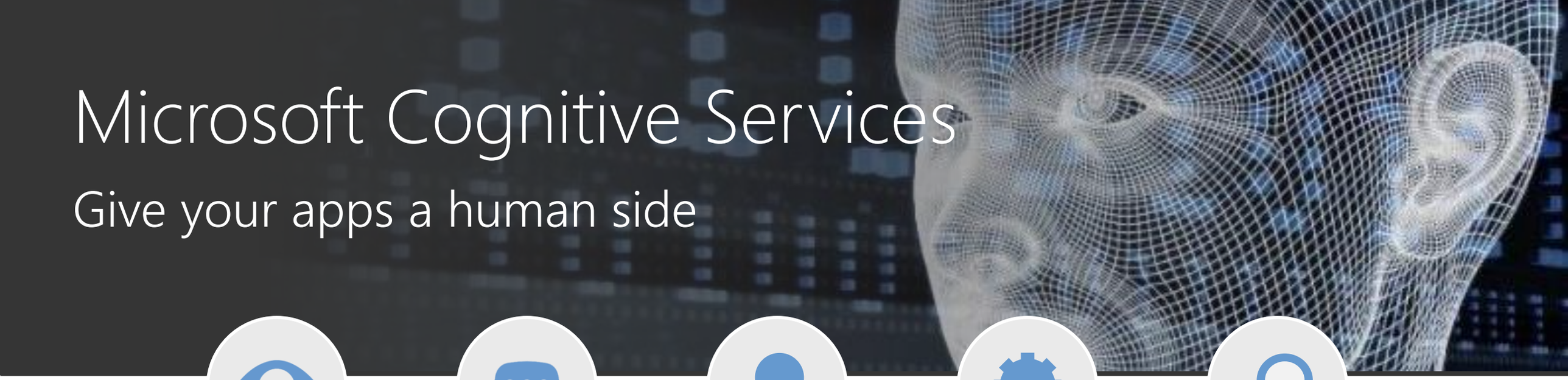
Microsoft Cognitive Services

Give your apps a human side

A set of ready to use APIs for every developer to use without requiring machine-learning expertise

Microsoft Cognitive Services

Give your apps a human side



Vision

Computer Vision
Emotion
Face
Video Indexer
Custom Vision
Form Recognizer

Speech

Speech to Text
Text to Speech
Speech Translation
Speech Recognition

Language

Immersive Reader
Language Understanding
QnA Maker
Translator Text & Speech
Text Analytics

Decision

Anomaly Detector
Content Moderator
Personalizer

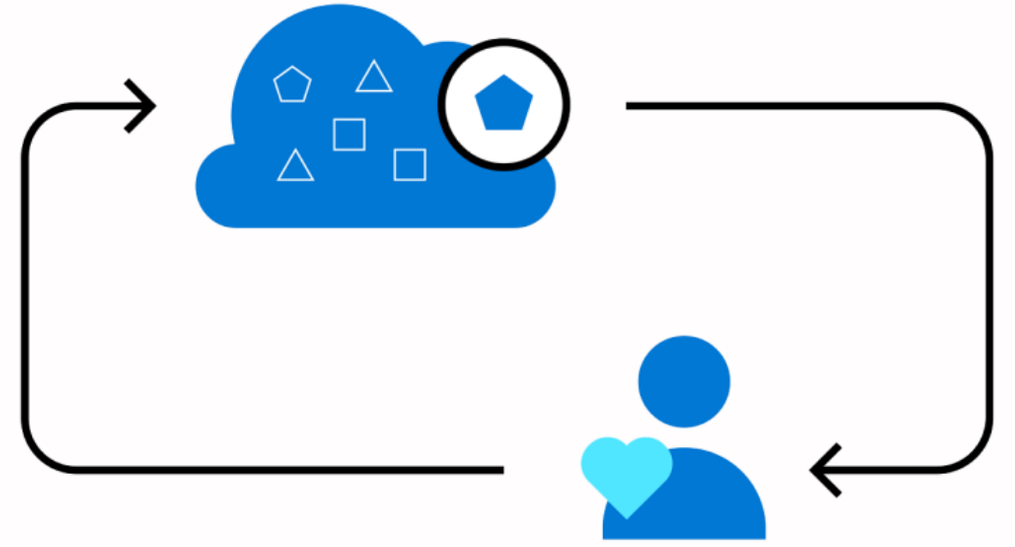
Search

Bing Autosuggest
Bing Image Search
Bing News Search
Bing Video Search
Bing Web Search
Bing Custom Search
Bing Spell Check

Azure Personalizer Service.

Azure Personalizer Service

A cloud-based API service that enables your application to choose the best, single *content* item to show each user based on collective real-time information you provide about content and context



How it works

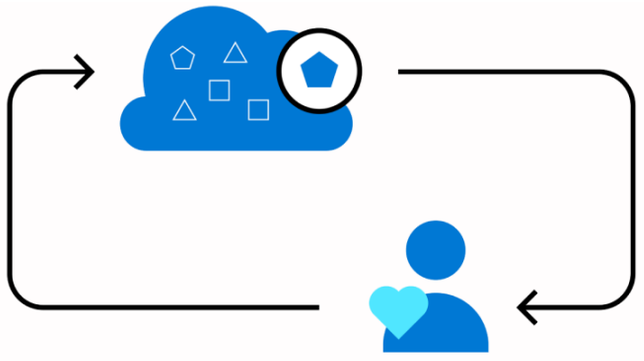
Suggestion
Personalizer
Powered by reinforcement learning
Observation
All users
Reward

Requirements

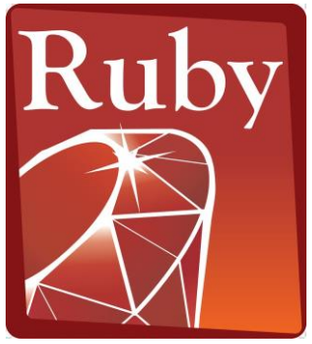
Up to 50 Items

Content with action features and content features

Minimum 1000/day content events



Programming Language SDK support



Pricing

Instance	Price		Storage quota
Free	50,000 transactions free /month		10 GB
S0	<1M transactions	$1 per 1000 transactions	10 GB/ 1M transactions/month
	1M - 9M transactions	$0.35 per 1000 transactions	
	9M - 90M transaction	$0.20 per 1000 transactions	
	> 100M transactions	$0.05 per 1000 transactions	

Security & Compliance

Azure has the deepest and most comprehensive compliance coverage in the industry

GLOBAL

ISO 27001

ISO 27018

ISO 27017

ISO 22301

ISO 9001

SOC 1 Type 2

SOC 2 Type 2

SOC 3

CSA STAR Self-Assessment

CSA STAR Certification

CSA STAR Attestation

US GOV

Moderate JAB P-ATO

High JAB P-ATO

DoD DISA SRG Level 2

DoD DISA SRG Level 4

DoD DISA SRG Level 5

SP 800-171

FIPS 140-2

Section 508 VPAT

ITAR

CJIS

IRS 1075

INDUSTRY

PCI DSS Level 1

CDSA

MPAA

FACT UK

Shared Assessments

FISC Japan

HIPAA / HITECH Act

HITRUST

GxP 21 CFR Part 11

MARS-E

IG Toolkit UK

FERPA

GLBA

FFIEC

REGIONAL

Argentina PDPA

EU Model Clauses

UK G-Cloud

China DJCP

China GB 18030

China TRUCS

Singapore MTCS

Australia IRAP/CCSL

New Zealand GCIO

Japan My Number Act

ENISA IAF

Japan CS Mark Gold

Spain ENS

Spain DPA

India MeitY

Canada Privacy Laws

Privacy Shield

Germany IT Grundschutz workbook

Recognitions

2019 Inaugural ACM SIGAI Industry Award for Excellence in Artificial Intelligence

2019 O'Reilly Strata Data Conference Award for Most Innovative Product

Demos.

Resources

- https://github.com/Azure-Samples/cognitive-services-personalizer-samples
- https://personalizationdemo.azurewebsites.net/

Thank you! Questions?

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