Microsoft

January 30, 2019 — 8:30 AM - 5:00 PM | Detroit, Michigan

Azure Dev Day

Learn, architect, and develop solutions on Azure

#AzureDevDays

for developers, by developers

Learn.

Connect.

Explore.

Microsoft

Microsoft Cognitive Services

Ryan Miller
Practice Manager, Applications & Infrastructure

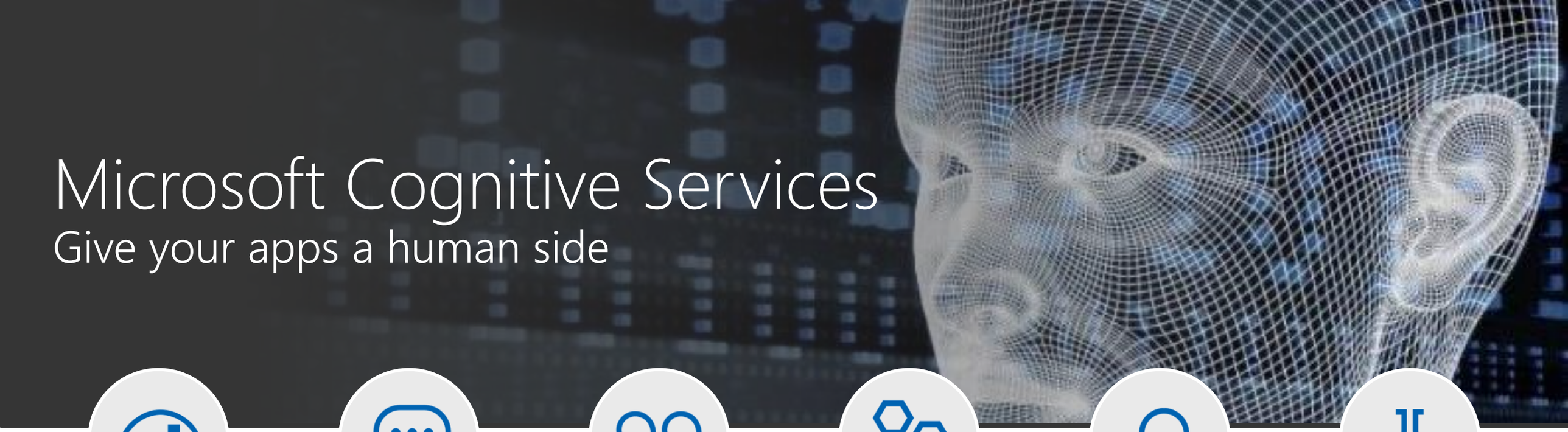
Learn.

Connect.

Explore.

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

Tap into rich knowledge amassed from the web, academia, or your own data

Search

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

Labs

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

A variety of real-world applications

Vision

What is in the image?

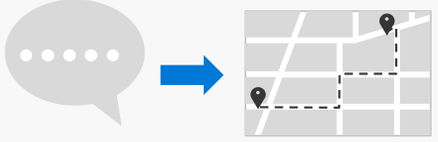
Computer Vision

Category	People; 5 faces
Adult/Racy?	False/False
Dominant colors	
Accent color	

Speech

Give me directions to the nearest local branch.

Bing Speech



- Convert spoken audio to text
- Convert text to spoken audio
- Extract intent of user

Language

Play today's customer call recording.

Language Understanding

Natural Language Processing

```
Intent: PlayCall
Content: Customer#
DateTime.date: today
```

Now Playing

11/29/2016 Customer Call

Knowledge

Top publications in customer lifecycle trends?

Knowledge Exploration

Here are the top results:

Customer Relationship Management – 5 Key Trends for 2014 CRM

Oct 28, 2015 – Here are FIVE key **trends** in 2014 that would help marketers in rolling ... Of late, marketers are looking at **customer lifecycle** management (CLM)

Predictive Customer Lifecycle Management (CLM)

The purpose of **Customer Life-cycle** Management (CLM) is to maximize both customer retention and .... Predictive trend analysis provides business visibility.

Trends 2016: The Future of Customer Service

Jan 5, 2016 – The top 10 **customer** service **trends** for 2016 that .... North American Consumer

Language Around Customer Lifecycles in the Banking Industry

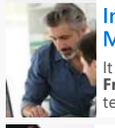
View PDF

Search

Search for 'fraud prevention'

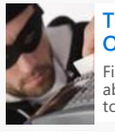
Bing News Search

Here is what I found:



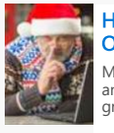
Information Communications Media Market News

It also investigates the top three expected **Fraud** Detection and **Prevention** programs, in terms of demand in key markets...



The Big Question: In-House or Outsourced Fraud Protection?

First, let's point out that there is not one absolute answer—there are "pros" and "cons" to each. Those who favor in-house...



How to Protect Your Business from Online Fraud this Holiday Season

Michael heads fraud prevention tool. Online and mobile shopping are expected to continue growing apace...

Why Microsoft Cognitive Services?

Easy

Roll your own with REST APIs

Simple to add: just a few lines of code required

Flexible

Integrate into the language and platform of your choice

Breadth of offerings helps you find the right API 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

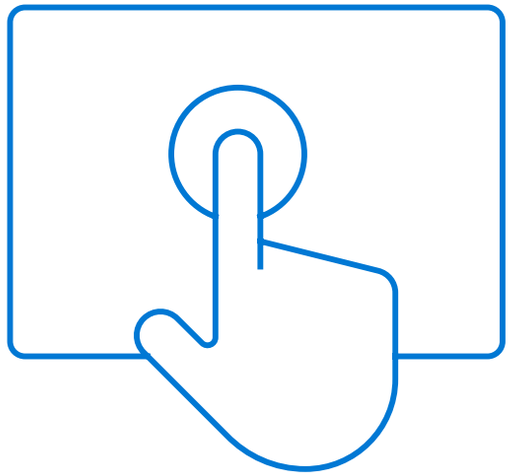
Quality documentation, sample code, and community support

GitHub

stackoverflow

msdn

uservoice



Demo

Intelligent Kiosk

Vision

Computer Vision API

Distill actionable information from images

Face API

Detect, identify, analyze, organize, and tag faces in photos

Emotion API

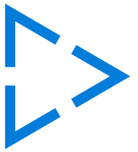
Personalize experiences with emotion recognition

Content Moderator

Machine-assisted moderation of text and images, augmented with human review tools

Custom Vision Service

Customizable web service that learns to recognize specific content in imagery



Video Indexer

Process and extract smart insights from videos

Speech

Bing Speech API

Convert speech to text and back again, and understand its intent

Speaker Recognition API

Give your app the ability to know who's talking

Custom Speech Service

Fine-tune speech recognition for anyone, anywhere

Knowledge

Academic Knowledge API

Explore relationships among academic papers, journals, and authors

Knowledge Exploration Service

Add interactive search over structured data to your project

Entity Linking Service

Contextually extend knowledge of people, locations, and events

Recommendations API

Provide personalized product recommendations for your customers

Custom Decision Service

Create custom experiences with adaptive, contextual decision-making

QnA Maker

Distill information into conversational, easy-to-navigate answers

Search

Bing Web Search API

Connect powerful search to your apps

Bing Image Search API

Bring advanced image and metadata search to your app

Bing Video Search API

Trending videos, detailed metadata, and rich results

Bing News Search API

Link your users to robust and timely news searches

Bing Autosuggest API

Give your app intelligent autosuggest options for searches

Bing Entity Search

Enrich user experiences with contextual entity search results

Bing Custom Search

Create a highly-customized web search experience

Microsoft Cognitive Services Labs

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

Project Prague
Gesture based controls

Project Cuzco
Event associated with Wikipedia

Project Johannesburg
Route logistics

Project Nanjing
Isochrones calculations

Project Abu Dhabi
Distance matrices

Project Wollongong
Score location attractiveness

Developer resources

Pricing

https://azure.microsoft.com/en-us/pricing/details/cognitive-services/

Documentation

https://docs.microsoft.com/en-us/azure/#pivot=products&panel=cognitive

Client SDKs

https://azure.microsoft.com/en-us/resources/samples/?sort=0&term=cognitive+services
https://github.com/southwood/project-oxford-python

Example Code

https://github.com/jsturtevant/happy-image-tester-django
https://github.com/Microsoft/Cognitive-Face-Android
https://github.com/Microsoft/Cognitive-Samples-IntelligentKiosk

Join Our Community

https://stackoverflow.com/questions/tagged/microsoft-cognitive
https://cognitive.uservoice.com/

Pricing

With Microsoft Cognitive Services you are only charged for what you use. Services typically have multiple tiers (e.g. free, standard) and users are charged for calls to the API.

For example here are the tiers and transaction charges for the *Face API:*

TIER	FEATURES	PRICE
Face API – free	Up to 20 transactions per minute	30,000 free transactions per month
Face API – standard	Up to 10 transactions per second	
	0–1,000,000 transactions	$1.50 per 1,000 transactions
	1,000,001–5,000,000 transactions	$1.10 per 1,000 transactions
	5,000,001–20,000,000 transactions	$0.65 per 1,000 transactions

https://azure.microsoft.com/en-us/pricing/details/cognitive-services

Thank You!