



# Cognitive Services

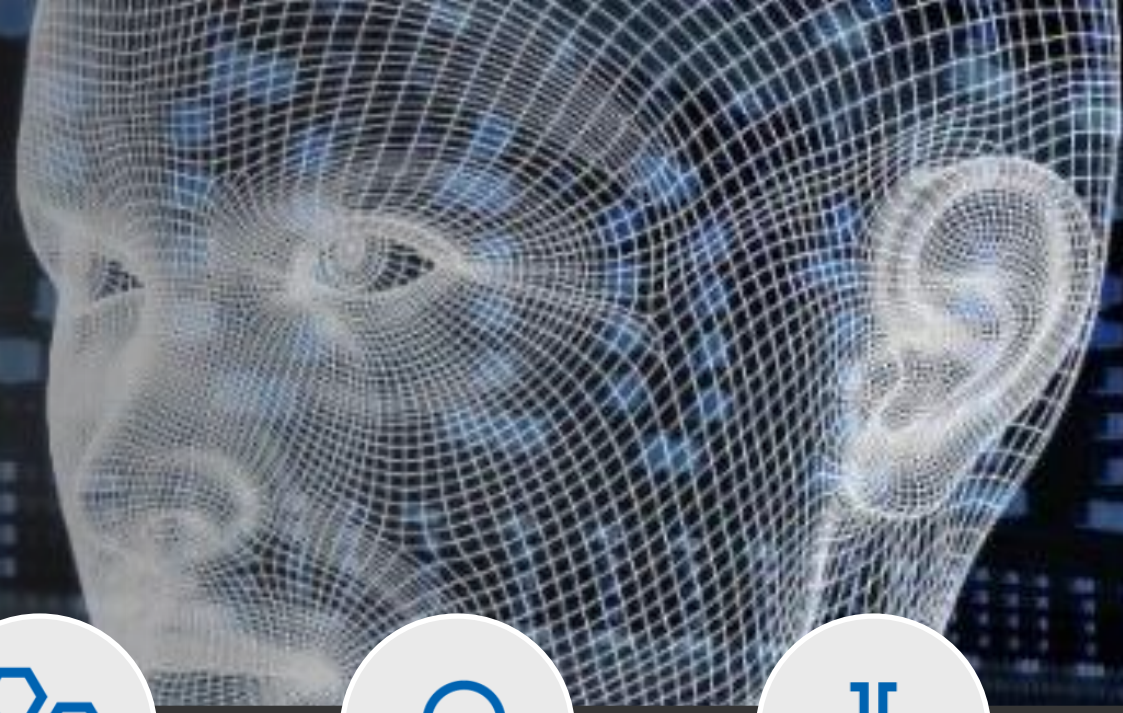
Ryan Miller

Microsoft Learning and Readiness



# 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 	Speech 	Language 	Knowledge 	Search 								
 What is in the image?	 Give me directions to the nearest local branch.	 Play today's customer call recording.	 Top publications in customer lifecycle trends?	 Search for 'fraud prevention'								
Computer Vision	Bing Speech	Language Understanding	Knowledge Exploration	Bing News Search								
 <table border="1"><tr><td>Category</td><td>People; 5 faces</td></tr><tr><td>Adult/Racy?</td><td>False/False</td></tr><tr><td>Dominant colors</td><td></td></tr><tr><td>Accent color</td><td></td></tr></table>	Category	People; 5 faces	Adult/Racy?	False/False	Dominant colors		Accent color		   Convert spoken audio to text Convert text to spoken audio Extract intent of user	Natural Language Processing  Intent: PlayCall Content: Customer# DateTime.date: today   Now Playing 11/29/2016 Customer Call	Here are the top results:  <a href="#">Customer Relationship Management – 5 Key Trends for 2014 CRM</a> 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)  <a href="#">Predictive Customer Lifecycle Management (CLM)</a> The purpose of Customer Life-cycle Management (CLM) is to maximize both customer retention and .... Predictive trend analysis provides business visibility.  <a href="#">Trends 2016: The Future of Customer Service</a> Jan 5, 2016 – The top 10 customer service trends for 2016 that .... North American Consumer  <a href="#">Language Around Customer Lifecycles in the Banking Industry</a> <a href="#">View PDF</a>	Here is what I found:   <a href="#">Information Communications Media Market News</a> It also investigates the top three expected Fraud Detection and Prevention programs, in terms of demand in key markets...   <a href="#">The Big Question: In-House or Outsourced Fraud Protection?</a> First, let's point out that there is not one absolute answer—there are "pros" and "cons" to each. Those who favor in-house...   <a href="#">How to Protect Your Business from Online Fraud this Holiday Season</a> Michael heads fraud prevention tool. Online and mobile shopping are expected to continue growing apace...
Category	People; 5 faces											
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# 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



# Demo

<https://github.com/Microsoft/Cognitive-Samples-IntelligentKiosk>



# 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



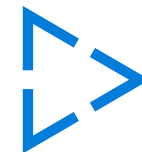
## Content Moderator

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



# Language



## **Bing Spell Check API**

Detect and correct spelling mistakes within your app



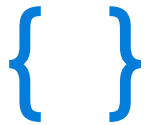
## **Web Language Model API**

Leverage the power of language models trained on web-scale data



## **Linguistic Analysis API**

Easily parse complex text with language analysis



## **Language Understanding Intelligent Service**

Teach your apps to understand commands from your users



## **Text Analytics API**

Detect sentiment, key phrases, topics, and language from your text



## **Translator**

Easily perform speech and text translation



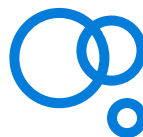


# Knowledge



## **Academic Knowledge API**

Explore relationships among academic papers, journals, and authors



## **Knowledge Exploration Service**

Add interactive search over structured data to your project



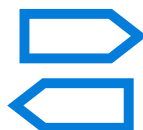
## **Entity Linking Service**

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

[labs.cognitive.microsoft.com](https://labs.cognitive.microsoft.com)

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



## **Project Gesture**

Gesture based controls



## **Project Ink Analysis**

Understand digital ink



## **Project URL Preview**

URL Preview and Moderation



## **Project Personality Chat**

Bot small talk w/ personality



## **Project Anomaly Finder**

Monitory data over time.



## **Project Local Insights**

Score location attractiveness

# 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

