



SUBMISSIONS OPEN
NOW

SUBMISSIONS CLOSE
1ST JULY 2017

VOTING OPENS
4TH JULY 2017

CONFERENCE
SATURDAY - 16TH SEPTEMBER

TICKETS \$50

DDD CONFERENCE 2017

non-profit • inclusive atmosphere • community selected content



**GOJKO
ADZIC**

Author of *Impact Mapping*
and *Specification by Example*



**KRIS
HOWARD**

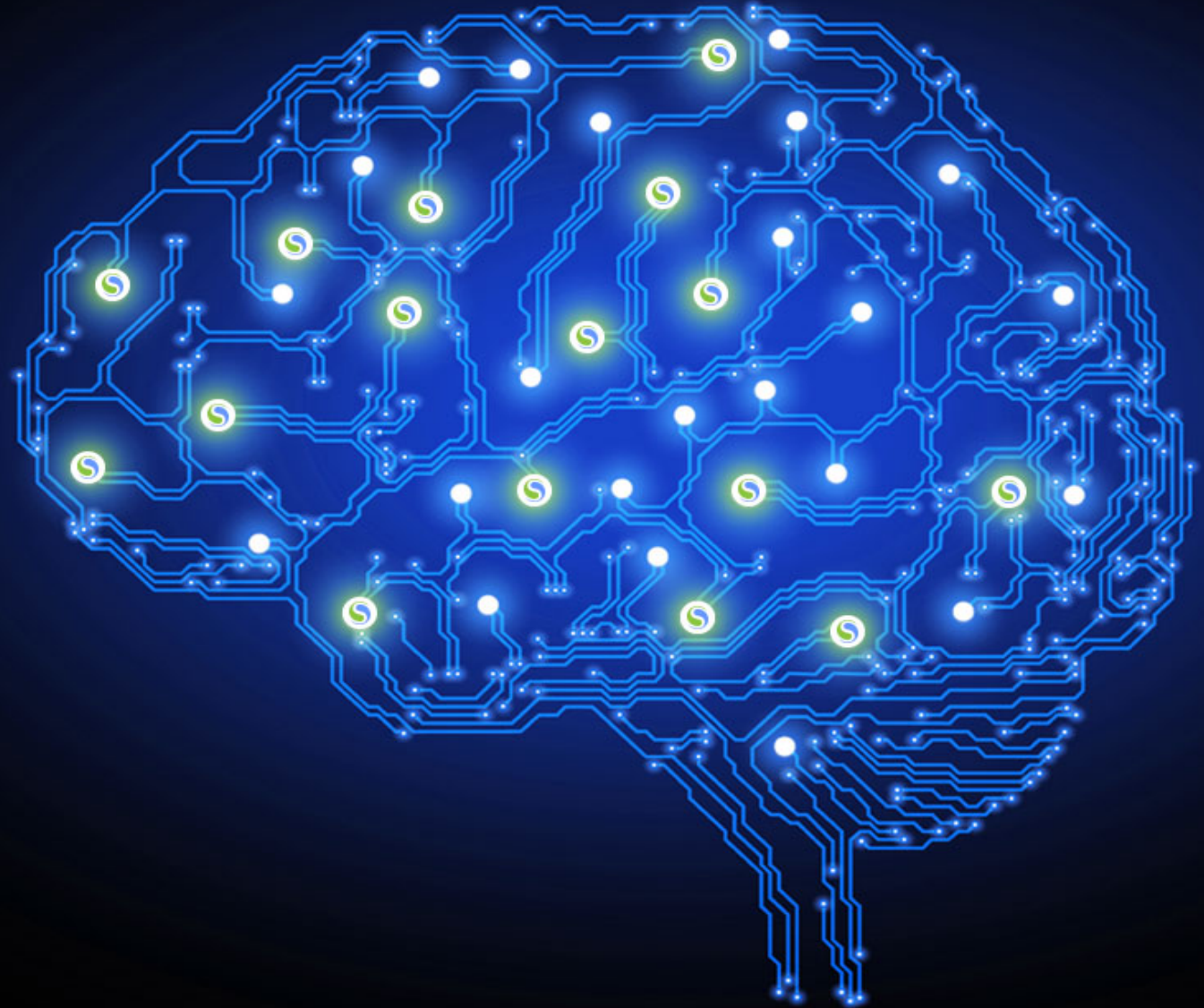
Technologist, blogger, maker
and speaker
TEDxMelbourne presenter

<https://dddperth.com>

MS Cloud User Group Intelligent Apps

Charles Poulsen
Technology Strategist @ MSFT
@chazwoza
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June 21, 2017



“OUR GOAL IS TO **DEMOCRATISE A.I.**
TO EMPOWER EVERY PERSON
AND EVERY ORGANISATION
TO **ACHIEVE MORE**”

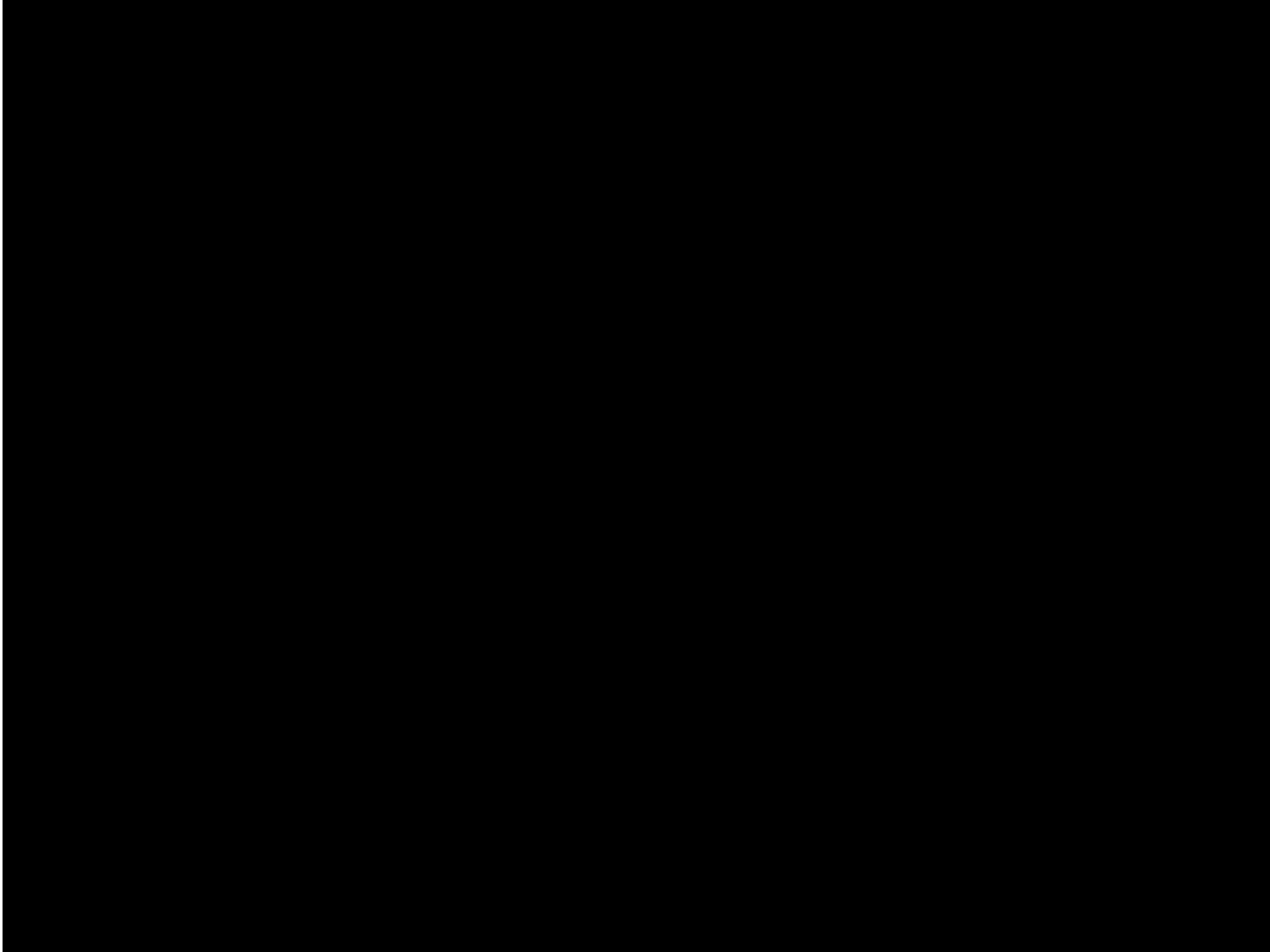
- Satya Nadella



Agenda

1. AI and Cognitive landscape
2. Microsoft Cognitive Services overview
3. Using Cognitive Services in your apps (demos, coding etc)
4. Advanced and Future Topics

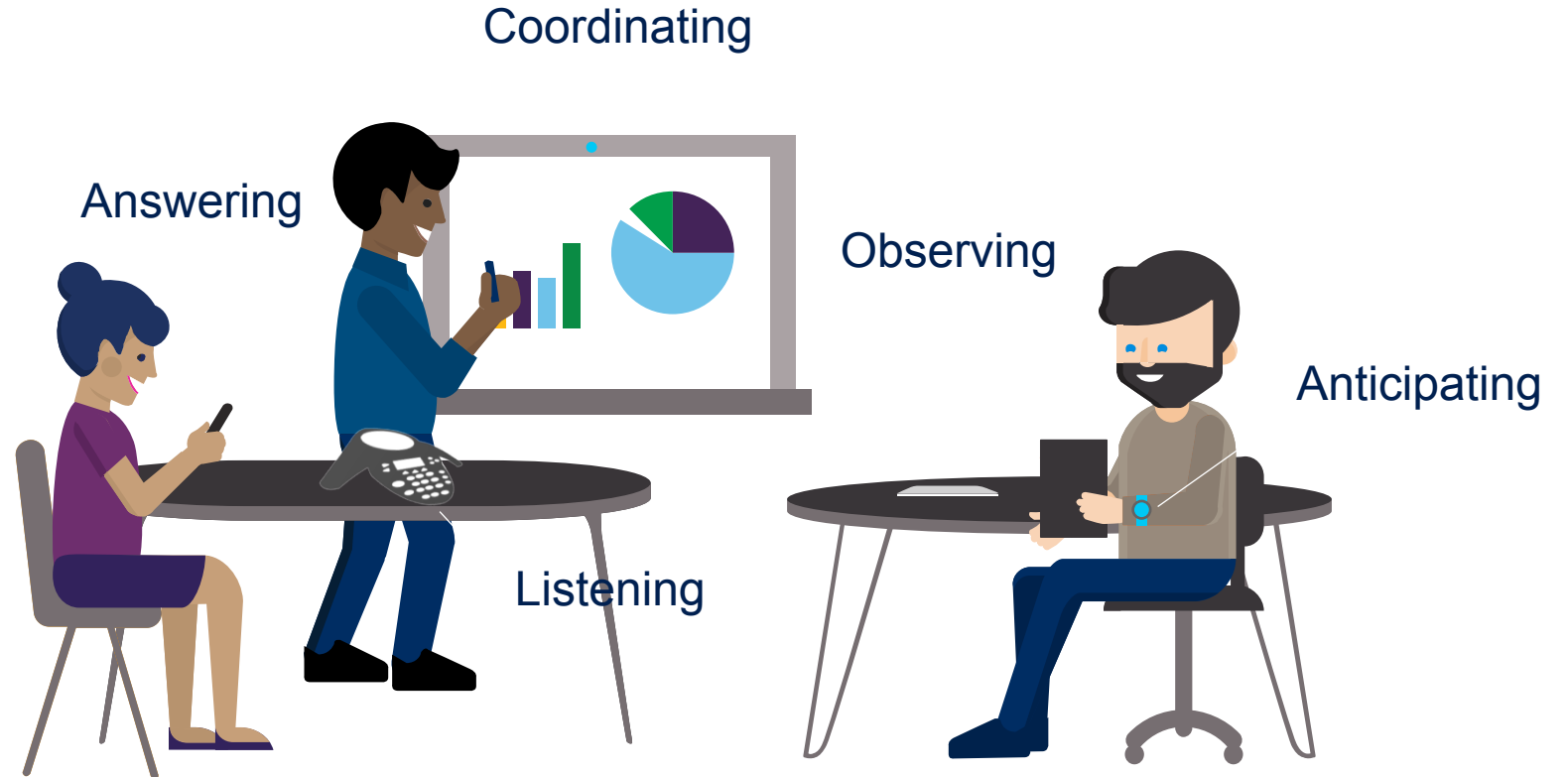
An intelligent app: Seeing AI project



We learn and
use technology.

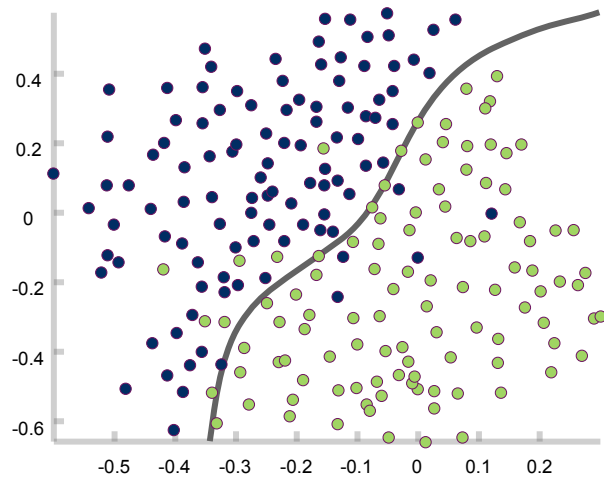


Technology learns us
and discovers ways to be
helpful.

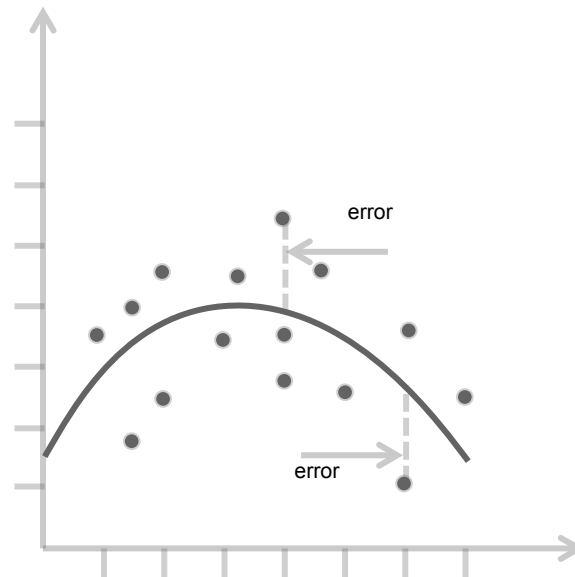


Machine Learning 101 - Common

Classification



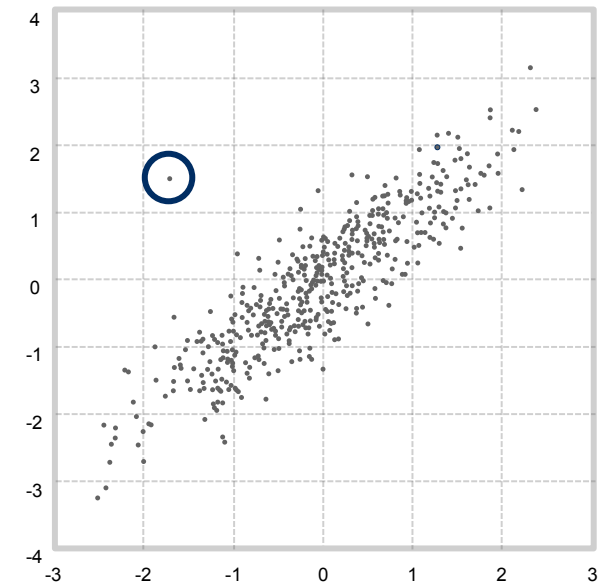
Regression



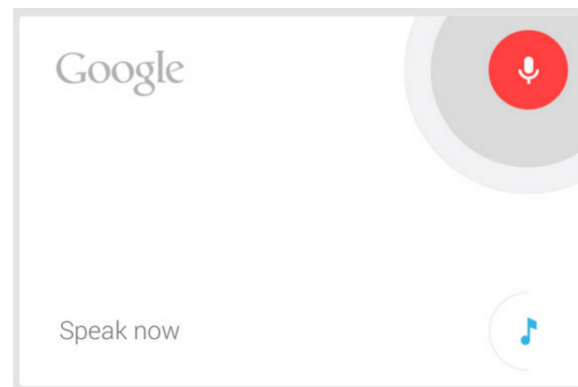
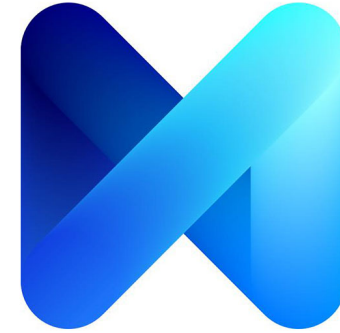
Recommenders



Anomaly detection



Personal Digital Assistants



Cortana's got skills

A number of partners are currently developing skills for Cortana. Some of the first skills are now available¹ as an early preview and are listed below. Many of these skills work best on Windows 10 Creators Update, in addition to Android and iOS.² For any skills that aren't working for you, please provide us feedback in Cortana using the feedback button.

Featured All



Dark Sky

"Hey Cortana, ask Dark Sky for today's forecast."



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Domino's Pizza

"Hey Cortana, ask Domino's to place my Easy Order."



[LEARN MORE](#)



Food Network

"Hey Cortana, ask Food Network for brunch recipes by Ina Garten."



[LEARN MORE](#)



Insurance Advisor

"Hey Cortana, open Insurance Advisor."



[LEARN MORE](#)



OpenTable

"Hey Cortana, ask Open Table to reserve a table at Palomino."



[LEARN MORE](#)



Progressive

"Hey Cortana, ask Progressive Insurance for tips to save money on my car."



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Skyscanner

"Hey Cortana, ask Skyscanner if the BA flight to Edinburgh is on time?"



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StubHub

"Hey Cortana, ask StubHub to find me concerts this weekend."



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TuneIn

"Hey Cortana, play 90.3 on TuneIn."



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iHeartRadio

"Hey Cortana, play Z100 on iHeartRadio."



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Conversation as a Platform

Bots

<https://dev.botframework.com/>

The screenshot shows a chat interface with a group chat header: "Lilian Rincon, Yasmin Khan, Cortana, Silver Cup" with "5 members" and a timestamp of "11:12 am". A user "@Silver Cup Flat White, please" has sent a message. The bot "Silver Cup" responds at "10:23 pm" with the text "I'll get that ready for you Lilian. Would anyone else like something?" and three buttons: "Americano", "Flat White", and "Iced Latte". A user "@Silver Cup Americano, please" responds at "10:23 pm". The bot "Silver Cup" responds again at "10:23 pm" with the same text and buttons. A user "Yasmin" responds at "10:23 pm" with "@Silver Cup Iced Latte, please". The bot "Silver Cup" responds at "10:23 pm" with "I'll get that ready for you Yasmin". The bot "Silver Cup" then asks "Where should I deliver?" at "10:23 pm" with two buttons: "Send to my location" and "Choose another place". A user "@Silver Cup Send to my location" responds at "10:23 pm". At the bottom, there is a text input field "Type a message here" and icons for attachments, voice, and video.

Lilian Rincon, Yasmin Khan, Cortana, Silver Cup
5 members 11:12 am

@Silver Cup Flat White, please

Silver Cup 10:23 pm
I'll get that ready for you Lilian. Would anyone else like something?

Americano Flat White Iced Latte

10:23 pm
@Silver Cup Americano, please

Silver Cup 10:23 pm
I'll get that ready for you Gurdeep. Would anyone else like something?

Americano Flat White Iced Latte

Yasmin 10:23 pm
@Silver Cup Iced Latte, please

Silver Cup 10:23 pm
I'll get that ready for you Yasmin

Silver Cup 10:23 pm
Where should I deliver?

Send to my location Choose another place

10:23 pm
@Silver Cup Send to my location

Type a message here

Platform Providers



Google Cloud Platform

Machine Learning, Video Analysis, Image Analysis, Speech Recognition, Text Analysis, Translation

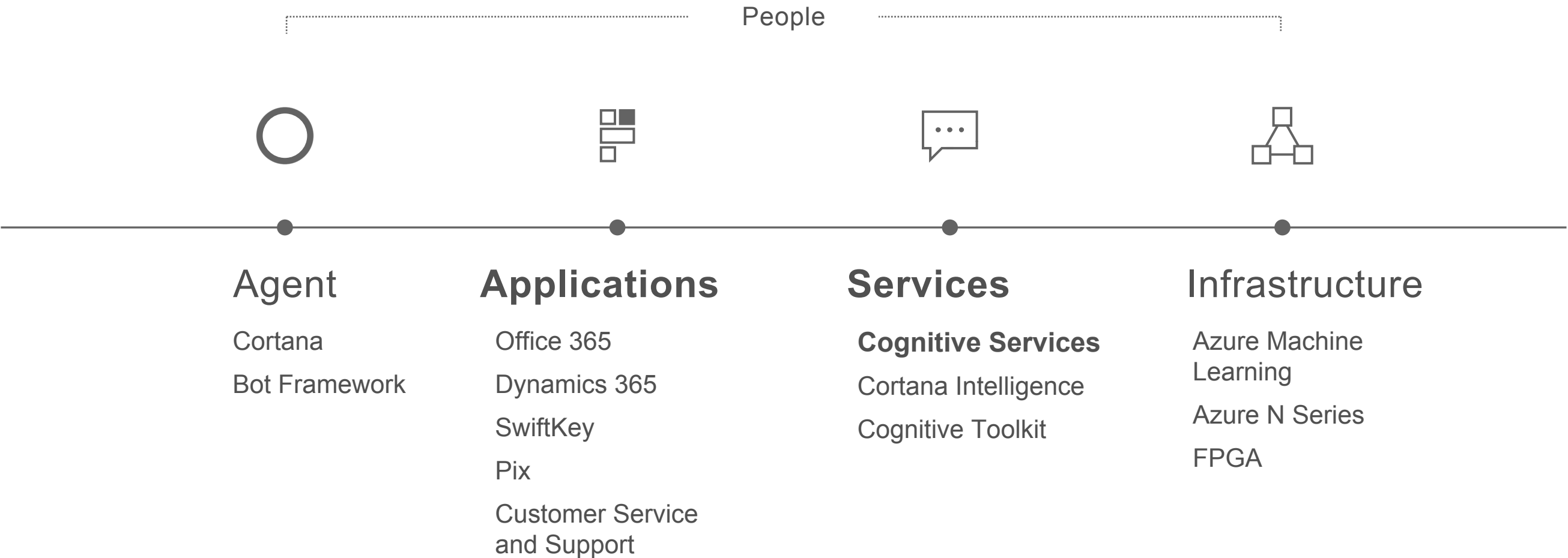


Machine Learning, Natural Language, Speech Recognition, Visual Search and Image Recognition, Text to Speech



Of course

Microsoft Artificial Intelligence Portfolio



Microsoft Cognitive Services

Give your apps
a human side



Vision

Computer Vision | Content Moderator | Emotion | Face | Video | Video Indexer | Custom Vision Service



Speech

Bing Speech | Custom Speech Service | Speaker Recognition



Language

Bing Spell Check | Language Understanding | Linguistic Analysis | Text Analytics | Translator Text & Speech | Web Language Model



Knowledge

Academic Knowledge | Entity Linking | Knowledge Exploration | Recommendations | QnA Maker | Custom Decision Service



Search

Bing Autosuggest | Bing Image Search | Bing News Search | Bing Video Search | Bing Web Search | Bing Custom Search



Labs

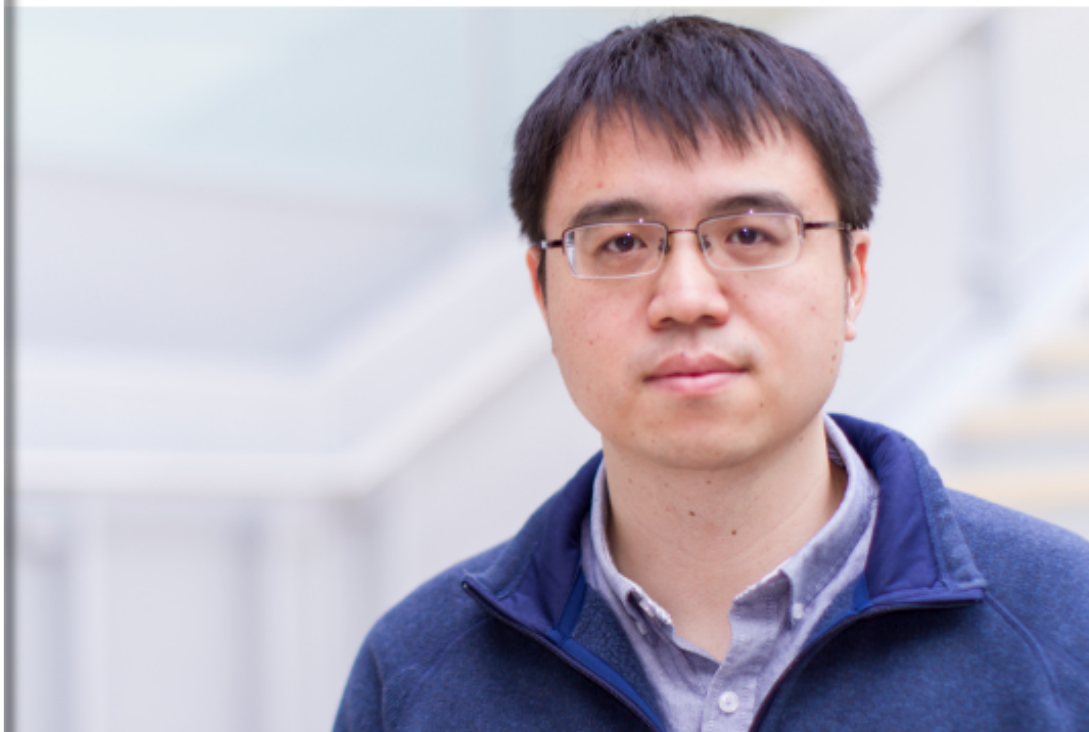
Project Prague | Project Cuzco | Project Johannesburg | Project Nanjing | Project Abu Dhabi | Project Wollongong

Video Indexer

<https://www.videoindexer.ai>

WORLD LEADING OBJECT RECOGNITION POWERED BY 152 LAYER DEEP NEURAL NETWORK

Microsoft researchers win ImageNet computer vision challenge



Jian Sun, a principal research manager at Microsoft Research, led the image understanding project. Photo: Craig Tuschhoff/Microsoft.

Posted December 10, 2015 By **Allison Linn**

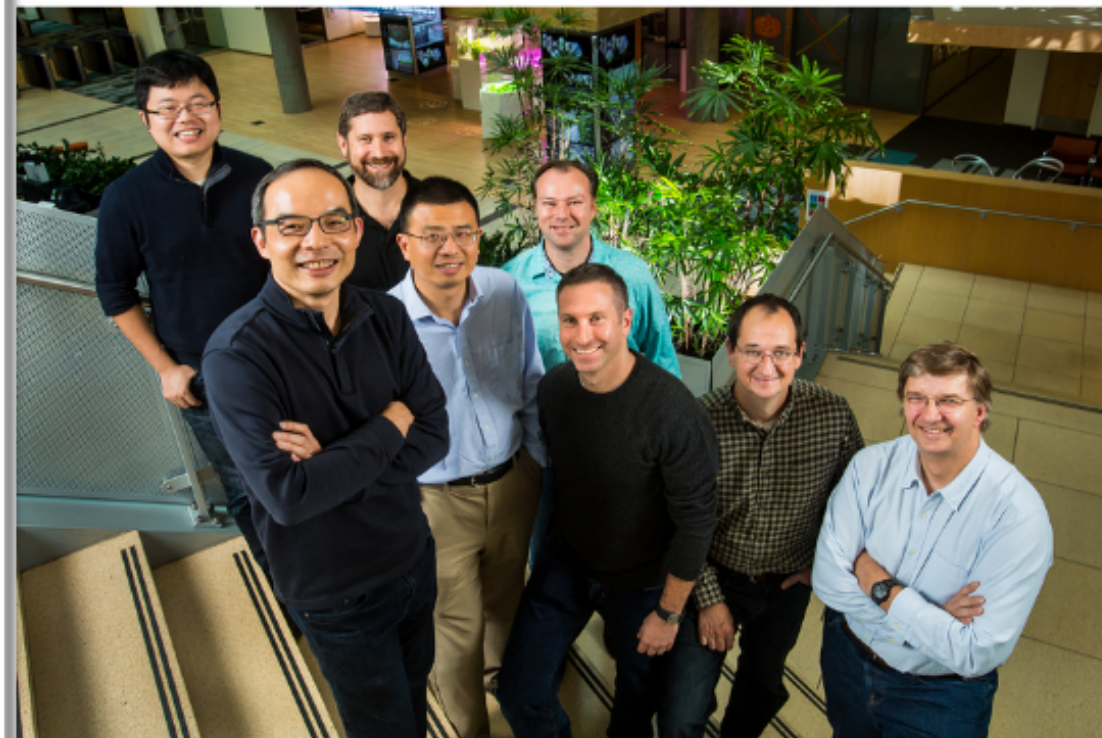


Microsoft researchers on Thursday announced a major advance in technology designed to identify the objects in a photograph or video, showcasing a system whose accuracy meets and sometimes exceeds human-level performance.

Microsoft's [new approach to recognizing images](#) also took first place in several major categories of image recognition challenges Thursday, beating out many other competitors from academic, corporate and research institutions in the [ImageNet](#) and [Microsoft Common Objects in Context](#) challenges.

VOICE RECOGNITION WITH 5.9% ERROR RATE REACHING HUMAN PARITY

Historic Achievement: Microsoft researchers reach human parity in conversational speech recognition



Microsoft researchers from the Speech & Dialogue research group include, from back left, Wayne Xiong, Geoffrey Zweig, Xuedong Huang, Dong Yu, Frank Seide, Mike Seltzer, Jasha Droppo and Andreas Stolcke. (Photo by Dan DeLong)

Posted October 18, 2016 By **Allison Linn**



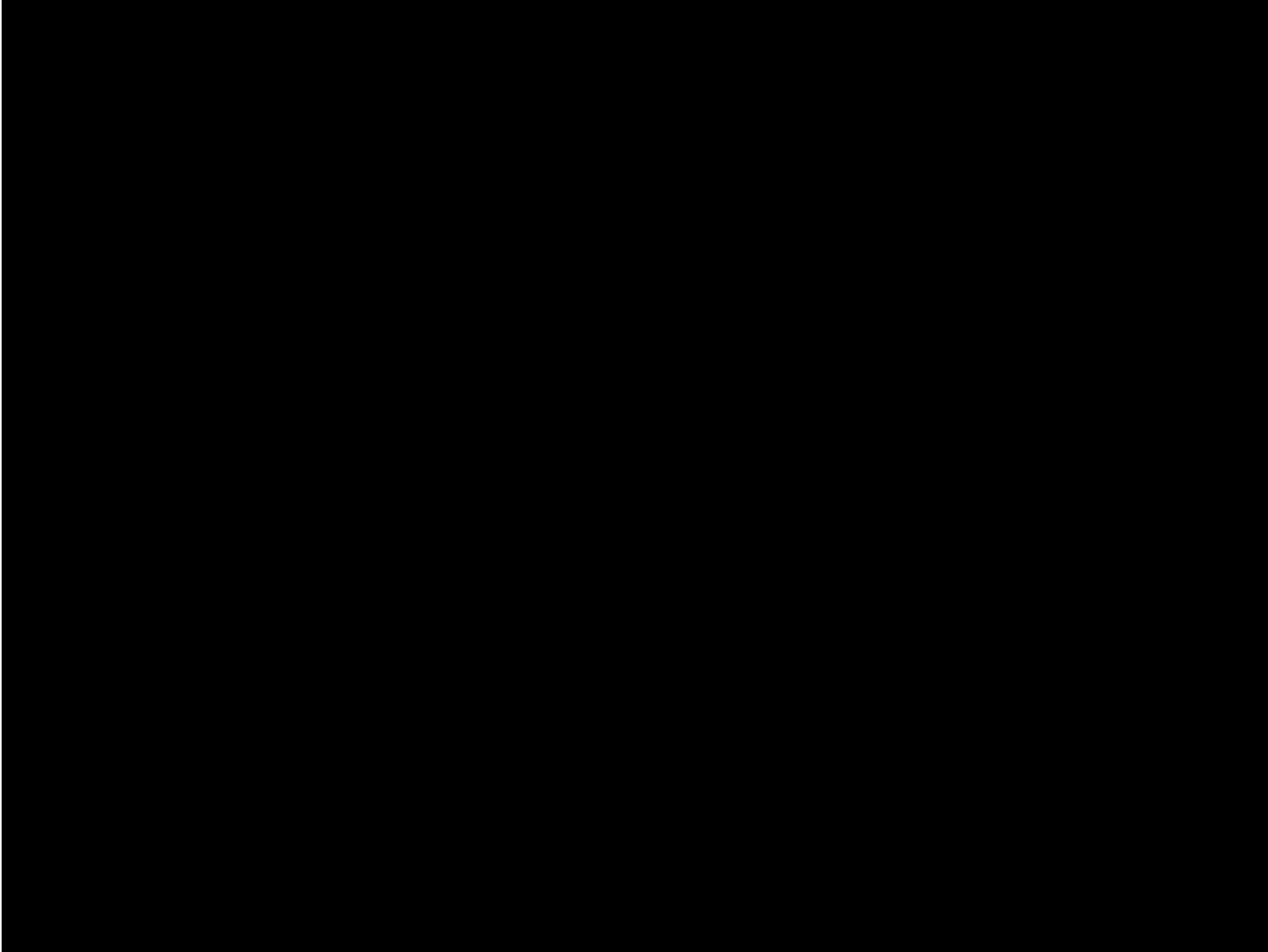
Microsoft has made a major breakthrough in speech recognition, creating a technology that recognizes the words in a conversation as well as a person does.

In a paper [published Monday](#), a team of researchers and engineers in Microsoft Artificial Intelligence and Research reported a speech recognition system that makes the same or fewer errors than professional transcriptionists. The researchers reported a word error

Microsoft Dictate

<http://www.dictate.ms/>

Example: Uber



Demo Intelligent Kiosk

Using Cognitive Services

Whats available for developers

- APIs (free tiers for most services!)
- SDKs (all on GitHub)
 - Java, Python, Javascript, C# and others
- Management and Monitoring Tools
 - Azure Portal, Individual Management Portals
- Documentation
- Support (Azure portal and stack overflow)

Demo

Explore Cognitive Services

Demo

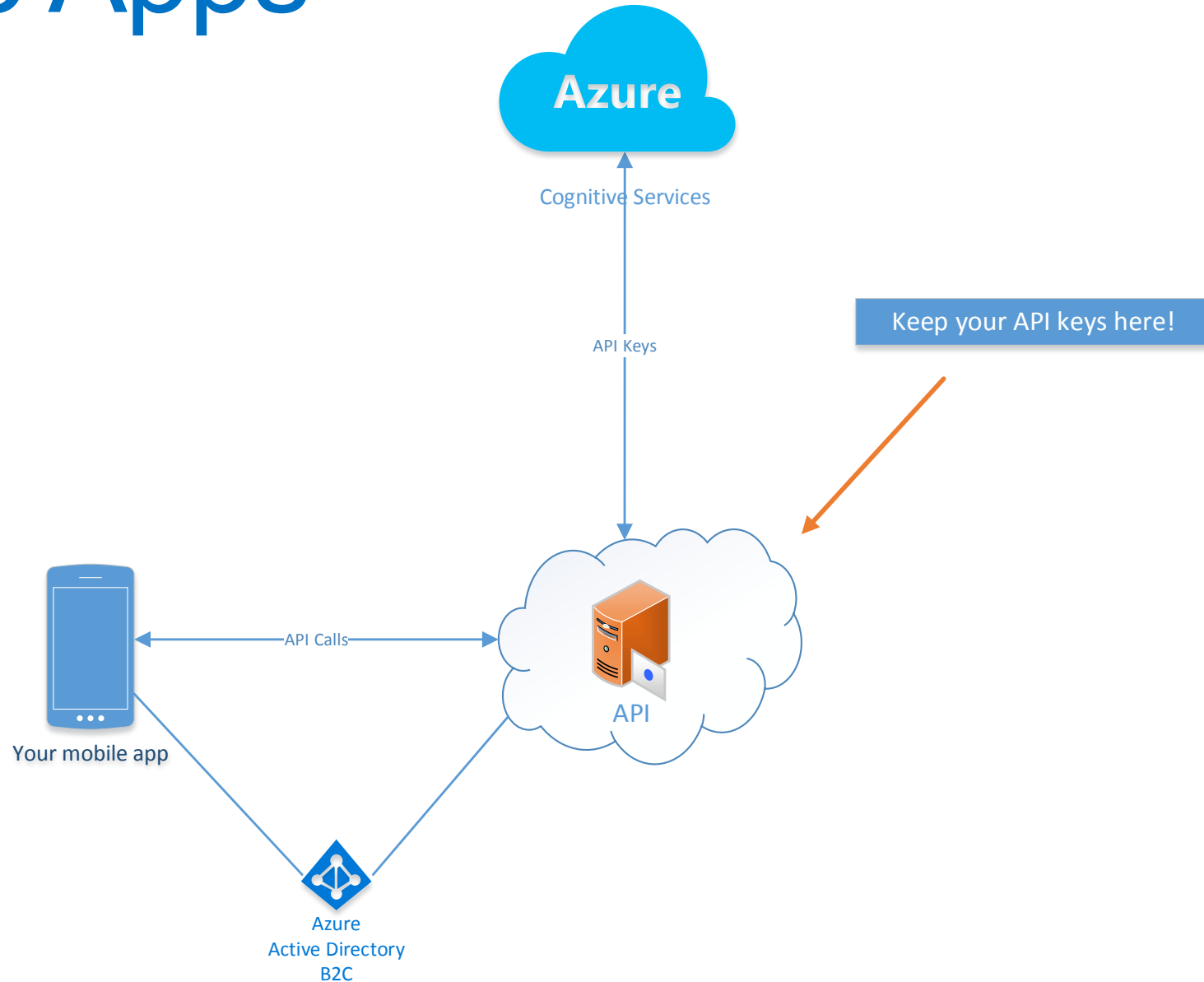
Set up Cognitive Services

Demo

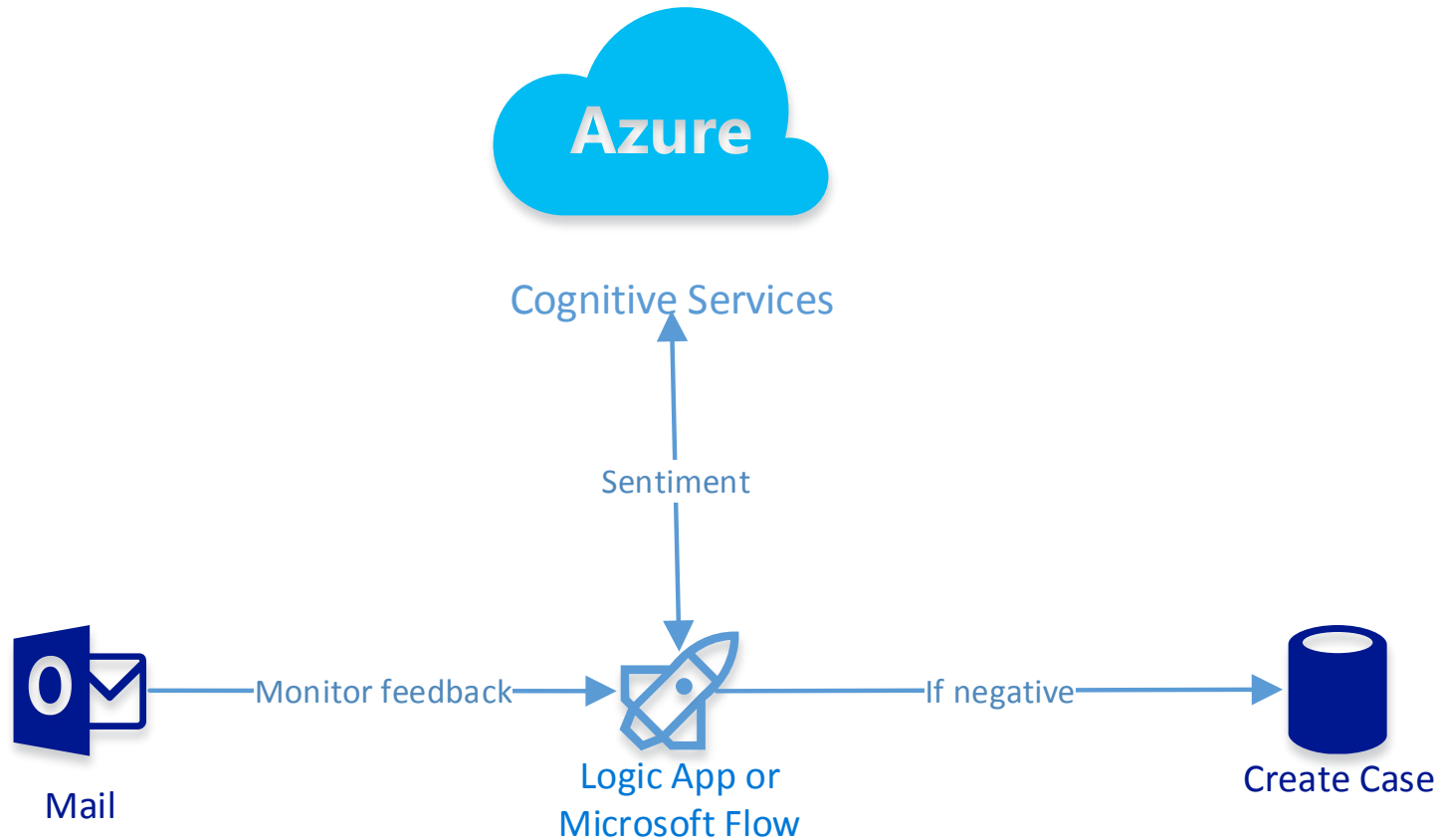
Calling Cognitive Services with Postman

Cognitive Services in your Apps

Mobile Apps



Flow and Logic Apps



Future Topics?

Machine Learning

Cortana Skills Kit

Cognitive Toolkit

Links

Cognitive Services: <https://www.microsoft.com/cognitive-services>

Cognitive Services blog: <https://azure.microsoft.com/en-gb/blog/topics/cognitive-services/>

Support via Stack Overflow: <https://stackoverflow.com/questions/tagged/microsoft-cognitive>

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

GitHub: <https://github.com/search?q=org%3AMicrosoft+cognitive>

Thank you!