



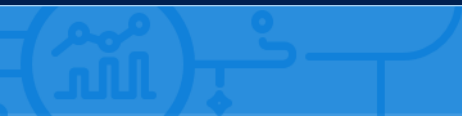
AI 101

Moritz Winzig

Services Solution Specialist for Artificial Intelligence & Bots

Munich & online, 19.01.2021

AI@Microsoft





Assigning human-like qualities to digital experiences



Perceives its environment



Mimics cognitive functions

Weak AI

Separate cognitive capabilities: seeing, natural language, vision, reasoning

What is AI?



Learns from example in volumes of data



Programs that write itself based on examples



Classifies, recommends, predicts, groups, segments

Strong AI

Combining weak AI with a consciousness or "mind"



Machine Learning: Programs That Write Itself



???



Dog

Cat





C. Michael Gibson MD

@CMichaelGibson

Folgen

Determining if an image is a Chihuahua or muffin is a tough problem in artificial intelligence



Parents: If **all** the kids from school would jump down a cliff, would you do the same?

Kids: No, of course not!

Machine learning algorithm: **HELL YEAH!**

Twitter taught Microsoft's AI chatbot to be a racist asshole in less than a day

By James Vincent | Mar 24, 2016, 6:43am EDT

Via *The Guardian* | Source *TayandYou (Twitter)*

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Source: <https://www.theverge.com/2016/3/24/11297050/tay-microsoft-chatbot-racist>

Microsoft CEO on crazy Tay AI: It was not up to the mark

CEO Satya Nadella briefly addresses the controversy surrounding the company's teen AI chatbot.



Dan Graziano  March 30, 2016 10:09 a.m. PT



"Back to the drawing board." That's how Chief Executive Satya Nadella addressed Microsoft's recent gaffes with Tay, its artificial-intelligence teenage chatbot.

Microsoft took the chatbot offline last week after it spewed racist and sexist remarks on Twitter. However, Tay managed to sneak back online for a



Source: <https://www.cnet.com/news/twitter-turned-microsoft-ai-teen-tay-into-horny-foul-mouthed-sex-bot-racist/>

Microsoft CEO
Satya Nadella:

„We should
think of
**Artificial
Intelligence**
as a modern
hammer“

Microsoft-Chef Satya N. x + v

spiegel.de/spiegel/microsoft-chef-satya-nadella-setzt-auf-kuenstliche-intelligenz-a-1117138.html

SPIEGEL ONLINE **DER SPIEGEL** SPIEGEL TV Anmelden

AUS DEM SPIEGEL AUSGABE 42/2016

SPIEGEL-Gespräch mit Microsoft-Chef Nadella SPIEGEL Plus

"Wir sollten künstliche Intelligenz als modernen Hammer begreifen"

Microsoft hat das Internet und die Smartphone-Revolution verschlafen, nun setzt Konzern-Chef Satya Nadella auf künstliche Intelligenz, um ein neues Technologiezeitalter einzuläuten.

Ein SPIEGEL-Gespräch von *Thomas Schulz* v und *Klaus Brinkbaumer* v

A portrait of Satya Nadella, the CEO of Microsoft, wearing glasses and a dark blue hoodie, standing in front of a wooden slat wall.

AI Maturity is Critical to Success



Foundational

Questioning what AI is and how to apply it

Wrong expectations or disappointment
Low digitization
Basic analytical capabilities

Example: Chat Bot Pilot



Approaching

Hopeful on AI and its promise

Digitization underway
Looking to increase or optimize processes
Cautious about disruption

Example: Productive Chat Bot



Aspirational

Experimented and applied AI

High digitization
Desires new business models
Achieved a data culture

Example: Multichannel, Intelligent Bot



Mature

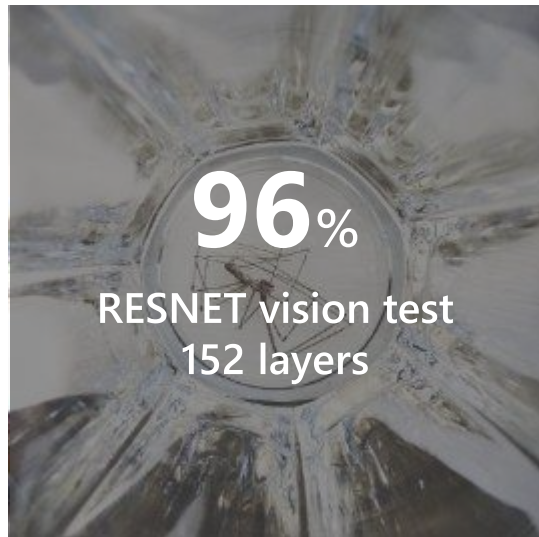
Emerging data science and operational capability

Understands model lifecycle and management
Building a foundational data architecture

Example: AI powered Customer 360 Platform

Microsoft AI breakthroughs

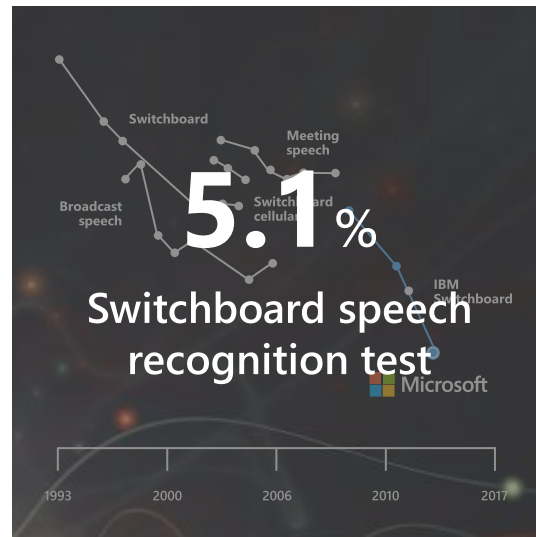
Vision



2016

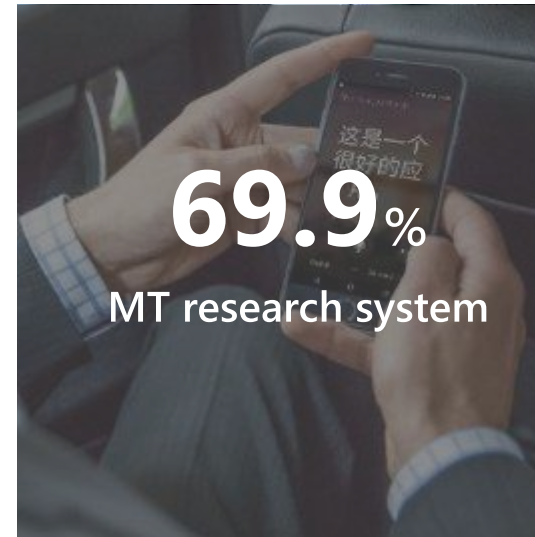
Object recognition
Human parity

Speech



2017

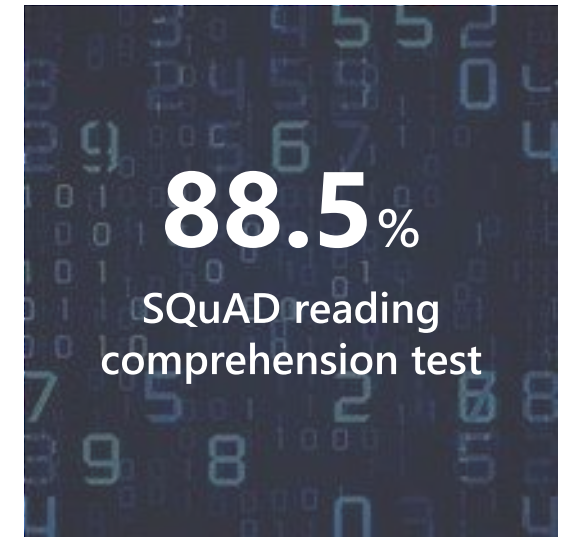
Speech recognition
Human parity



March 2018

Machine translation
Human parity

Language

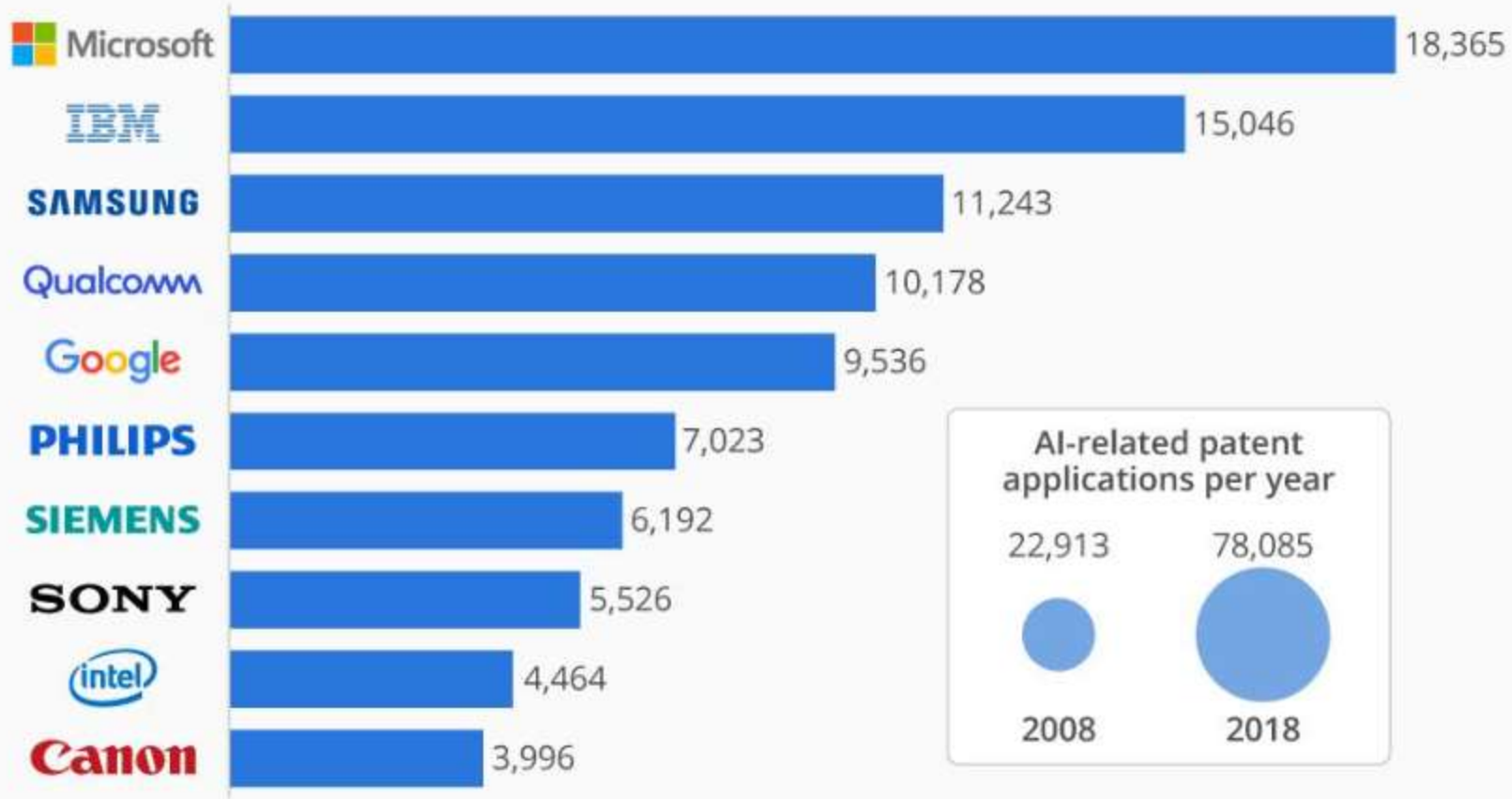


January 2018

Machine reading comprehension
Human parity

The Companies With the Most AI Patents

Companies with the most artificial intelligence-related patents*

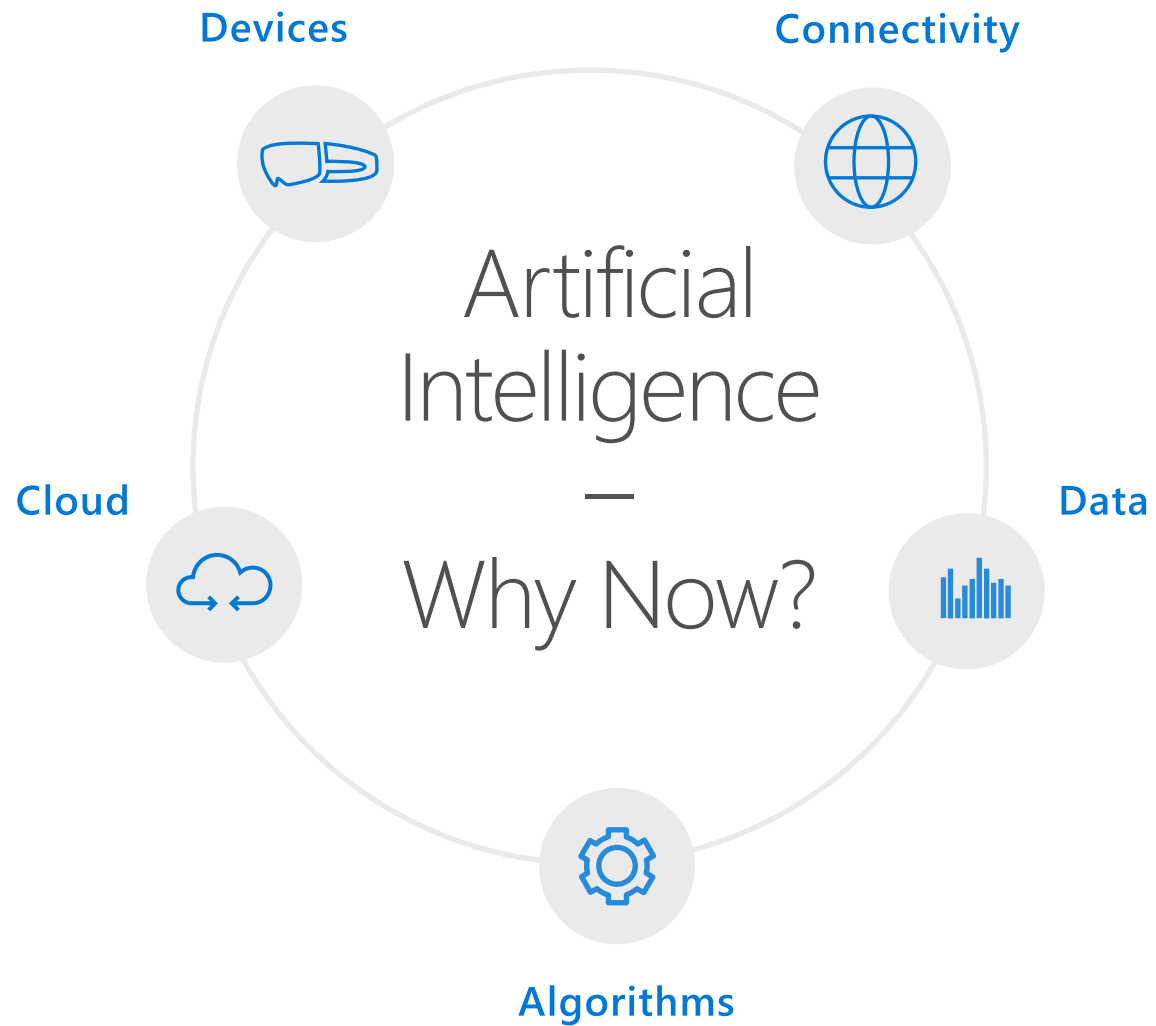


@StatistaCharts

* As of January 2019

Source: Iplytics

statista







Microsoft AI

For every person and every organization

People



Agent

Cortana



Applications

Office 365

Dynamics 365

Skype

Teams

Customer Service



Services

Bot Framework

Cognitive Services

Cortana Intelligence

Cognitive Toolkit



Infrastructure

Azure Machine Learning

Azure N-Series (GPU)

FPGA

Microsoft Cognitive Services

Give your apps a human side



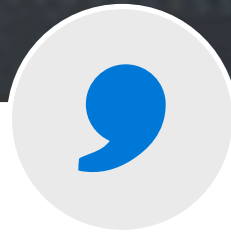
Vision

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



Speech

Bing Speech
Custom Speech Service
Custom Voice Service
Speaker Recognition



Language

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



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

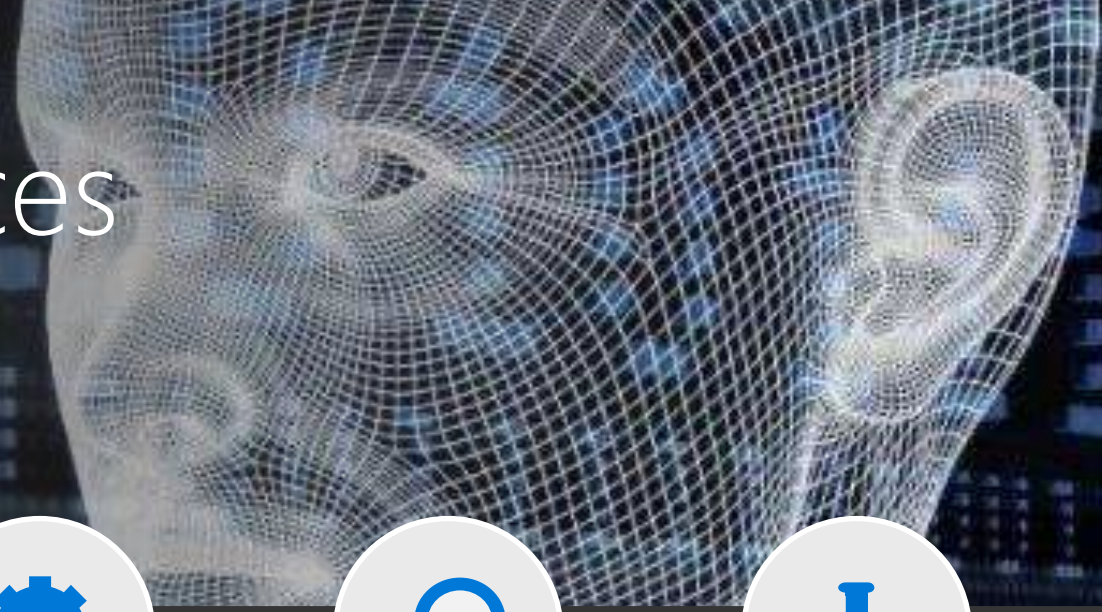


Labs

Project Prague (gesture)
Cuzco (events)
Johannesburg (routing)
Nanjing (Isochrones)
Abu Dhabi (distance matrix)
Wollongong (location)

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
Custom Voice Service
Speaker Recognition



Language

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



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 (gesture)
Cuzco (events)
Johannesburg (routing)
Nanjing (Isochrones)
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Best in class speech recognition



