



AI and Government

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Why now?

\$40B estimated additional revenue/shifting revenue driven by AI in three years

85% Enterprises using AI by 2020

AI advancements

Pervasive data

Cloud compute



Technologies transforming government



010110
001101
101010

Big Data and Open Data

Manage data wisely to drive productivity, increase mobility, and innovate new digital services across and between multiple departments and agencies and to a broader set of citizens and stakeholders



Security

Achieve a balance of security and citizen empowerment, with effective security controls across identity, device, data and apps, and infrastructure. Protect data against unauthorized access, detect attacks and breaches, and respond and adapt to prevent it from happening again



Analytics, Machine Learning, Artificial Intelligence

Bring greater wisdom into analysis and service delivery with on-demand cloud-based compute power. Enable a digitized redesign of existing processes to deliver new, more flexible services



Internet of Things

Connect infrastructures to make emergency systems more efficient, or reduce service response times across devices, cloud, analytics, and backend systems

AI Drivers

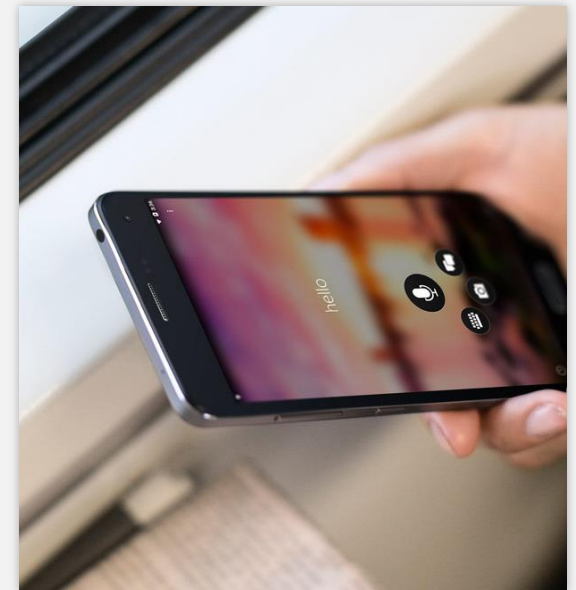
Cloud



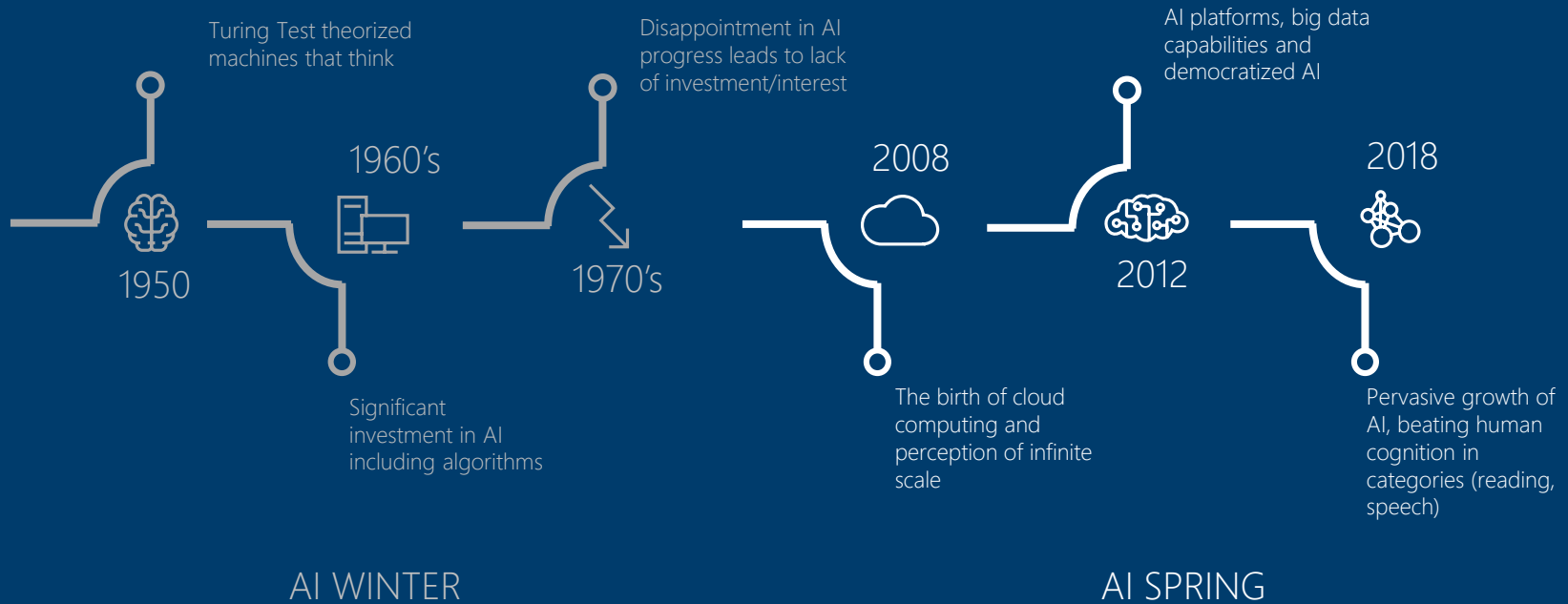
Data



Algorithms

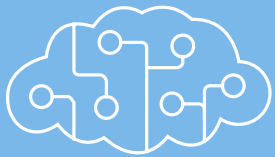


Evolution of Artificial Intelligence



AI, Machine Learning and Deep Learning

Artificial
Intelligence



Machine
Learning



Deep
Learning





Amplifying human ingenuity with intelligent technology



Reasoning

Learn and form
conclusions with
imperfect data



Understanding

Interpret meaning of data
including text, voice, images



Interacting

Interact with people
in natural ways

Digital Agents

95%

Customer interactions

powered by AI bots including
telephone and online by 2025



Engage customers

Build a loyal customer base
with a 24/7 customer-
centric approach to your
business



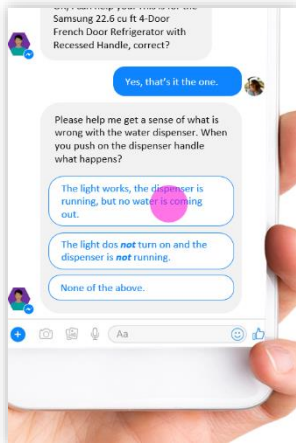
Empower employees

Increase employee productivity
and allow for focus on
innovation by freeing up time
through automation

Patterns for AI solutions

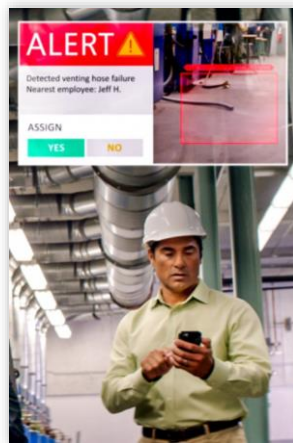
New generation of business agents

B2B, B2C, B2E



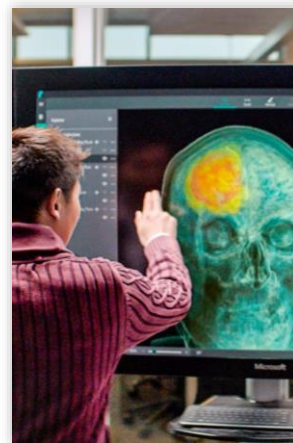
Person, object, and activity detection

Retail, manufacturing, security



AI assisted professionals

Marketing, legal, financial



Knowledge mining

Documents, video



Autonomous systems

Vehicles, networks, RPA

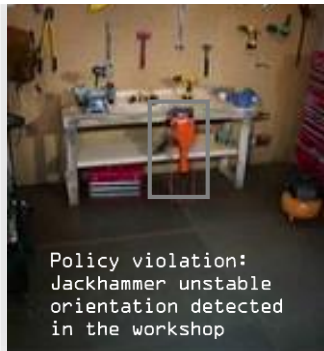


Intelligent algorithms to see, hear, speak, understand and interpret your user needs in more natural ways

Vision

From faces to feelings, allow apps to understand images and video

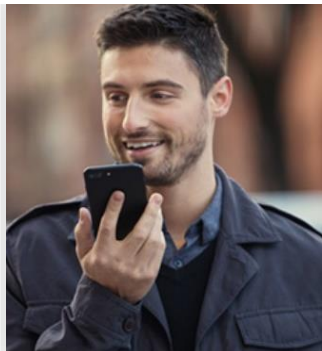
Show me what is in the image



Speech

Hear and speak to users by filtering noise, identifying speakers, and understanding intent

Convert this text to speech please...



Language

Process text and learn how to recognize what users want

Play today's conference call...

Natural Language Processing

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

Now Playing

11/29/2016 Customer Call

Knowledge

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

Top publications in AI...

Learning
1989, David E. Goldberg
Cited 18,910 times

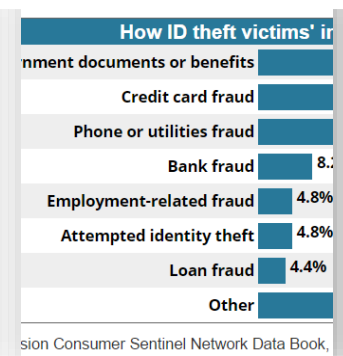
Induction of Decision Trees
1996, Machine Learning
J R Quinlan
decision tree expert system machine learning compute
Cited 4,819 times

Outline of a New Approach to the Analysis of Systems and Decision Processes
1973, IEEE Transactions on Systems, Man, and Cybernetics, Issue 3
Lotfi A Zadeh (University Of California Berkeley)
fuzzy set complex systems artificial neural network computer science machine learning artificial intelligence computer science
Cited 2,602 times

Search

Locate relevant information among billions of web pages, images, videos, and news with Bing APIs

Fraud prevention results...



Cognitive Services capabilities

Infuse your apps, websites, and bots with human-like intelligence



Vision

- Object, scene, and activity detection
- Face recognition and identification
- Celebrity and landmark recognition
- Emotion recognition
- Text and handwriting recognition (OCR)
- Video metadata, audio, and keyframe extraction and analysis
- Explicit or offensive content moderation
- Custom image recognition



Speech

- Speech transcription (Speech-to-text)
- Speech Synthesis (Text-to-speech)
- Real-time speech translation
- Speaker identification and verification
- Custom Speech models for transcription and translation
- Custom voice



Language

- Language detection
- Text sentiment analysis
- Key phrase extraction
- Entity recognition
- Spell checking
- Explicit or offensive text content moderation, PII detection
- Text translation
- Customizable text translation
- Contextual language understanding



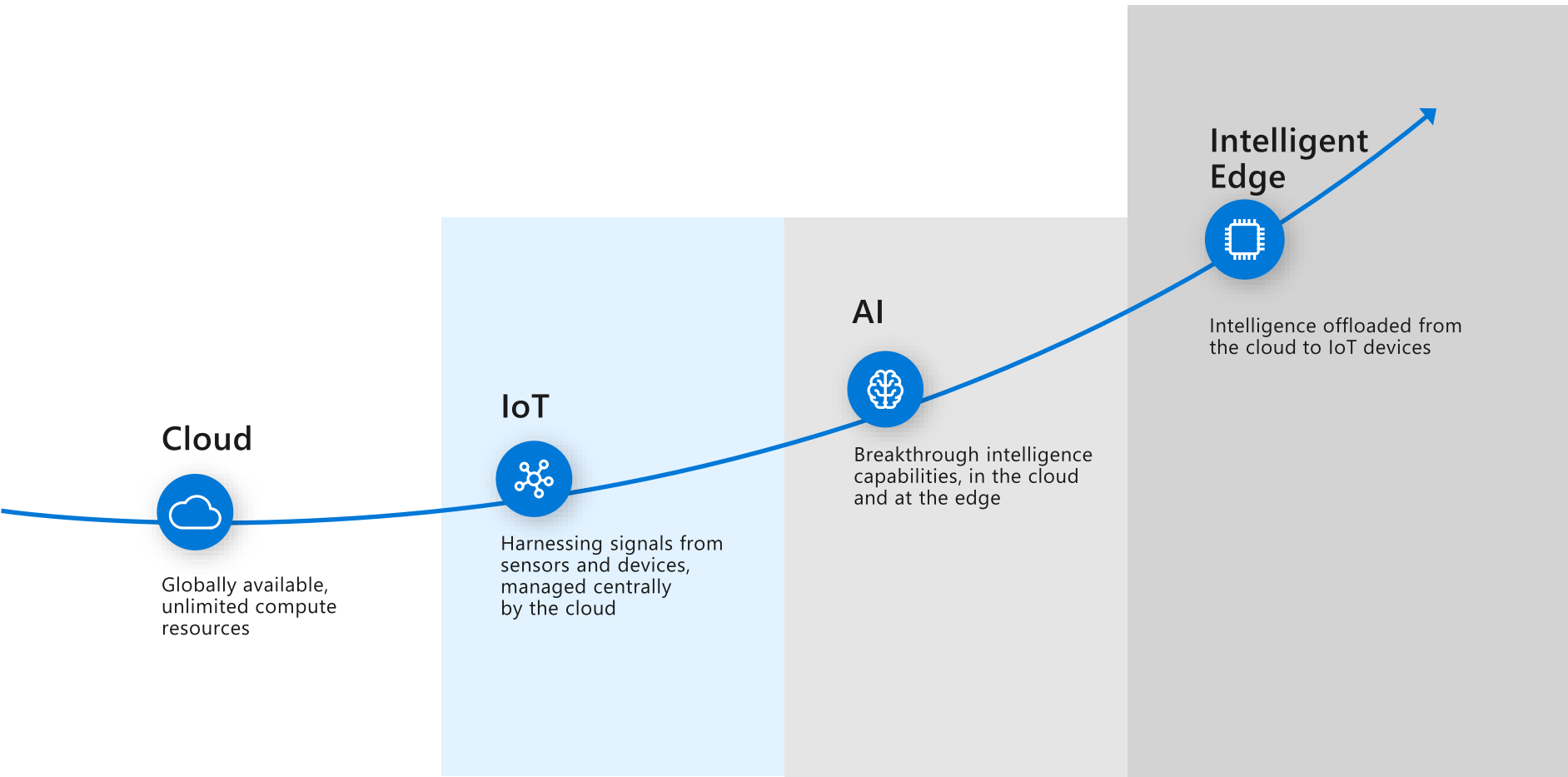
Knowledge

- Q&A extraction from unstructured text
- Knowledge base creation from collections of Q&As
- Semantic matching for knowledge bases
- Customizable content personalization learning



Search

- Ad-free web, news, image, and video search results
- Trends for video, news
- Image identification, classification and knowledge extraction
- Identification of similar images and products
- Named entity recognition and classification
- Knowledge acquisition for named entities
- Search query autosuggest
- Ad-free custom search engine creation



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