

MENS EN ROBOT

Een zoektocht naar een optimale samenwerking.....

WELKOM BIJ IBM

7 oktober 2019

PLATFOR
MITGERICH
ERNEME





WELKOM
KENNISMAKERS | LEDEN | SPREKERS

VAN DÉ COMMUNITY VAN VOOR DOOR KLANTGERICHTHEIDSPROFESSIONALS

INSPIRATIE – KENNIS – MOTIVATIE – TIPS – IDEEEN – NETWERK - PLEZIER.....

Alvast een blik naar 2020

Transformatie:
hoe krijg ik
iedereen mee?

Employees:
impact en
engagement

Business
Intelligence: van
inzicht naar actie

CX Business Case:
hoe de waarde
aantonen

Digital
Engagement

Disrupters: hoe
te anticiperen?

En meer.....

Inspiratiesessie Platform voor Klantgericht Ondernemen

AI and Robots, imagine the future, checkout the current state



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IBM Amsterdam, 7-10-2019

IBM = Innovation

5-6 bn invested in R&D yearly

>9000 patents granted in 2018

>3000 patents “set free”
to the market every year

Embracing Open Source

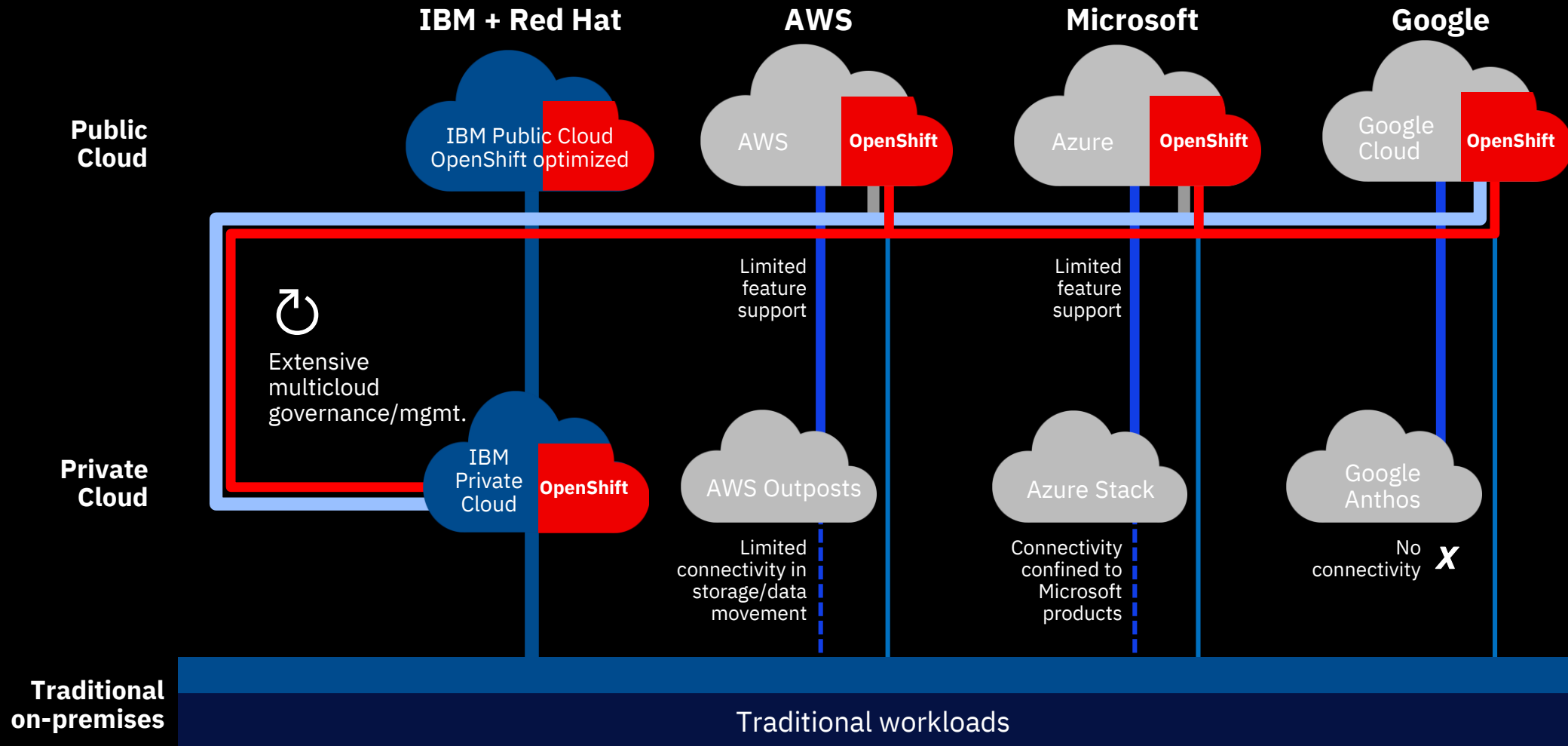
Quantum Computing

AI

Multi/hybrid Cloud



IBM + Red Hat - industry's only true hybrid multcloud platform

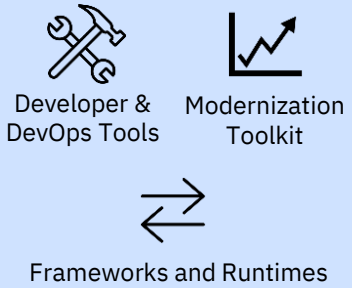


Cloud Paks – Pre-integrated for cloud use cases

Today, IBM offers clients *the first five Cloud Paks...*

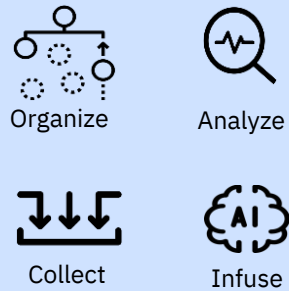
Migration ICP!

Cloud Pak for Applications



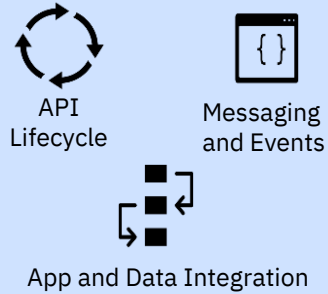
Container platform and operational services 

Cloud Pak for Data



Container platform and operational services 

Cloud Pak for Integration



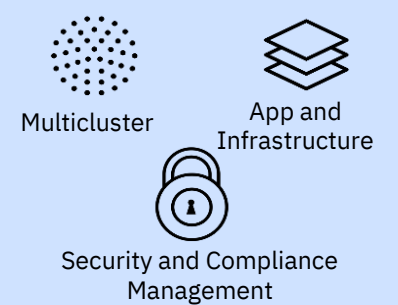
Container platform and operational services 

Cloud Pak for Automation



Container platform and operational services 

Cloud Pak for Multicloud Management



Container platform and operational services 

Runs on:



A next generation platform for a multcloud world

Modernize once,
avoid recoding expense.

Innovate anywhere,
with anyone's technology.

Move freely,
optimize for cost savings.



Expertise

Cloud Strategy | Migration | Development | Management



Advanced Technologies

AI | Analytics | Blockchain | Encryption | IoT | ML | Quantum



Capabilities

Application | Data | Integration | Management | Automation | Security



Foundation

Linux | Containers | Common Services | Multi-cluster Management



Infrastructure



IBM public cloud



AWS



Azure



Google Cloud



Edge



Private



Systems

Hybrid
multicloud
platform

Customer **Talk**

“Allemaal leuk, lief en aardig, maar wat levert die klantgerichtheid nu eigenlijk op?”

Persoonlijke connectie zorgt voor loyaliteit
Belangrijke bron van concurrentievoordeel
Ondernemingswaarde creëren met klantervaring
Klanten beschouwen als waardevol asset
Slimme investeringen in klantcontact
Analyse rendement van investeringen



Hoe helpen we de klant met een 'bot first approach'?

27/09/2019

Foute antwoorden op vragen en verkeerde interpretaties door de bot waren dagelijkse ergernissen van klanten. De eerste bots gaven alleen antwoorden die waren geprogrammeerd. Langzaam zien we de ...

Het klantgericht ondernemen vraagt om een strategie, die zowel in de dagelijkse activiteiten en werkzaamheden als in de organisatiestructuur terug komen met als doel om een vruchtbare lange termijn relatie op te bouwen met de klant.



In het kort de 7 belangrijkste redenen waarom klantgericht ondernemen niet wil lukken:

1. Passie voor de klant ontbreekt
2. Medewerkers voelen zich niet betrokken
3. Inspirerend leiderschap ontbreekt
4. Te veel intern gericht
5. Productgerichte organisatiestructuur
6. Techniek denken
7. Visie op klantgericht ondernemen ontbreekt



What is AI?

What people think it is

What it really is



$\sin \alpha = BC = \frac{a}{c};$
 $\cos \alpha = OB = \frac{b}{c};$
 $\operatorname{tg} \alpha = \frac{OB}{OA} = \frac{b}{a};$
 $\operatorname{ctg} \alpha = \frac{OA}{OB} = \frac{a}{b};$

$\alpha^\circ = \frac{180}{\pi} \alpha; \quad \alpha = \frac{\pi}{180} \alpha^\circ;$
 $360^\circ = 2\pi; \quad 180^\circ = \pi;$

$\sin^2 \alpha + \cos^2 \alpha = 1;$
 $\frac{\sin \alpha}{\cos \alpha} = \operatorname{tg} \alpha;$
 $\sin \alpha \cdot \operatorname{csc} \alpha = 1;$
 $\frac{\cos \alpha}{\sin \alpha} = \operatorname{ctg} \alpha$

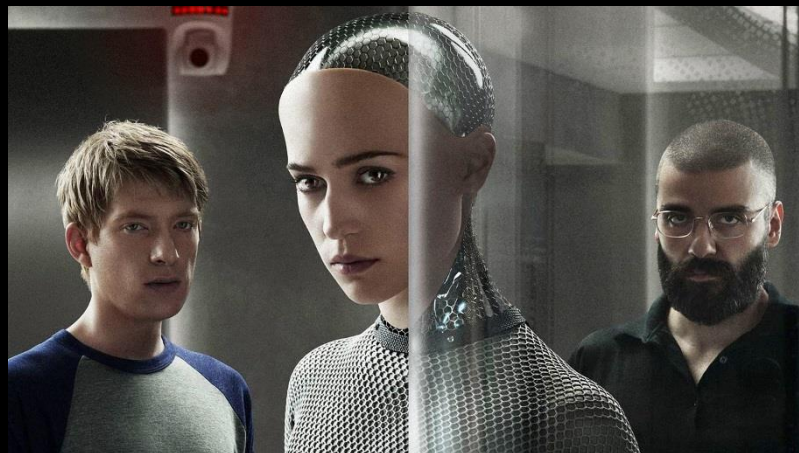
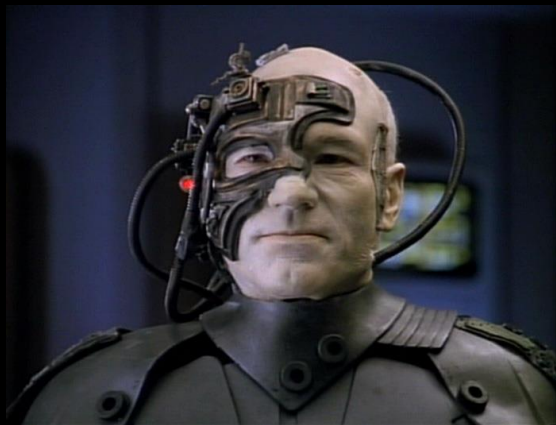
$\sin 2\alpha = 2 \sin \alpha \cos \alpha;$
 $\cos 2\alpha = \cos^2 \alpha - \sin^2 \alpha;$
 $\operatorname{tg} 2\alpha = \frac{2 \operatorname{tg} \alpha}{1 - \operatorname{tg}^2 \alpha};$

$\sin^2 \alpha + \cos^2 \alpha = 1;$
 $\frac{\sin \alpha}{\cos \alpha} = \operatorname{tg} \alpha;$
 $\sin \alpha \cdot \operatorname{csc} \alpha = 1;$
 $\frac{\cos \alpha}{\sin \alpha} = \operatorname{ctg} \alpha$

$x = -\frac{b}{2a};$
 $\Delta = 4ac - b^2$
 $a > 0;$
 $\operatorname{tg} \varphi = \pm a^2 \left(\frac{3}{\Delta}\right)^{\frac{3}{2}};$

$u = A \sin(\omega t + \varphi)$
 $u = a \sin \omega t + b \cos \omega t$

What does A.I. look like?



**AI Scientists Gather to Plot
Doomsday Scenarios (and
Solutions)**

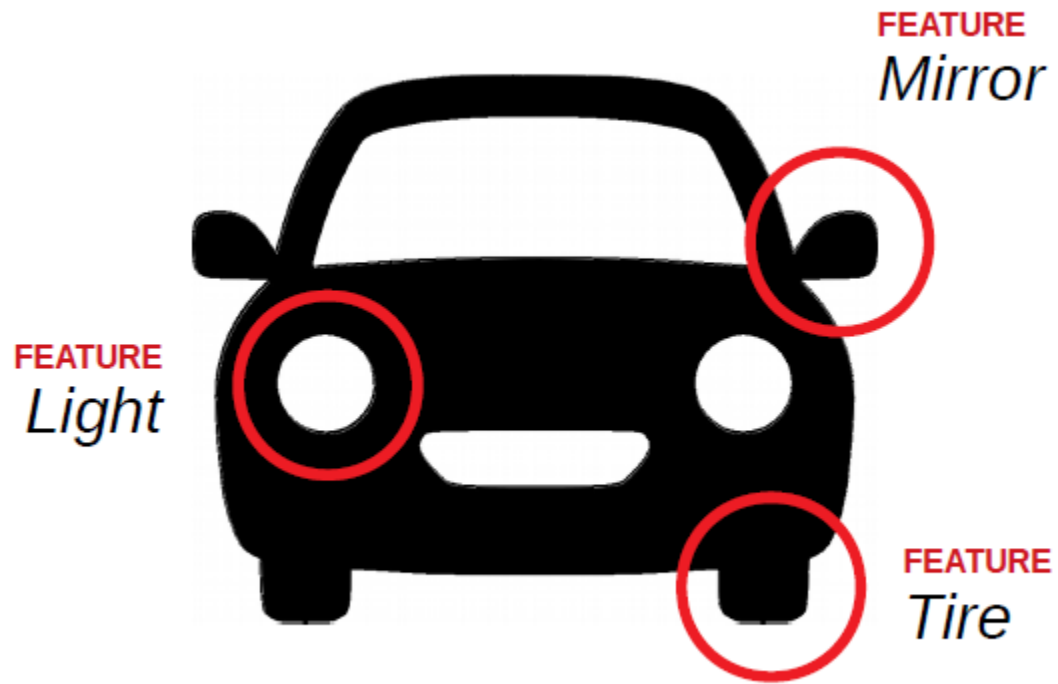
Researchers, cyber-security experts and policy wonks ask themselves: What could possibly go wrong?


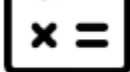


AI-test moet angst voor algoritmes wegnemen

20 november 2018 17:51 | [Pim van der Beek](#)

A 2 step process

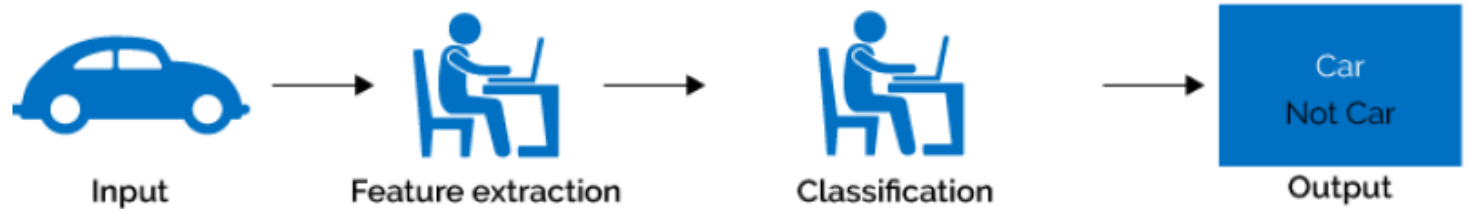


CAR	
	2 mirrors
	4 tires
	2 front lights

AI / ML / DL

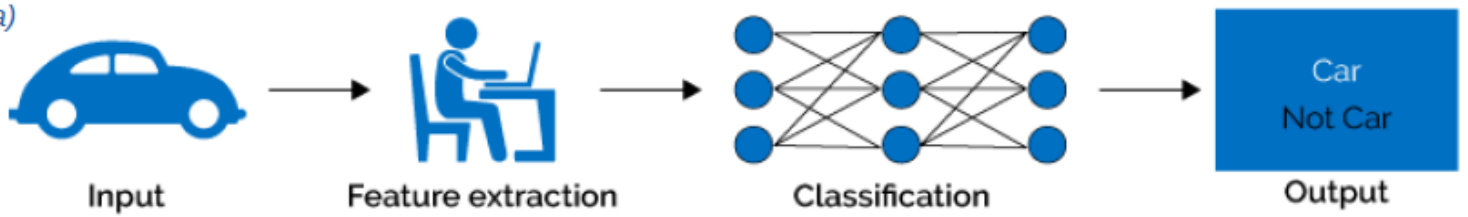
Artificial Intelligence (AI)

(includes rule based engines)



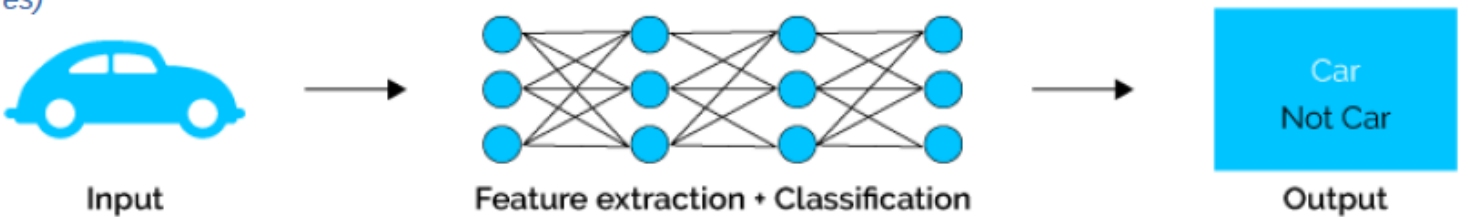
Machine Learning (ML)

(machine learns from the data)

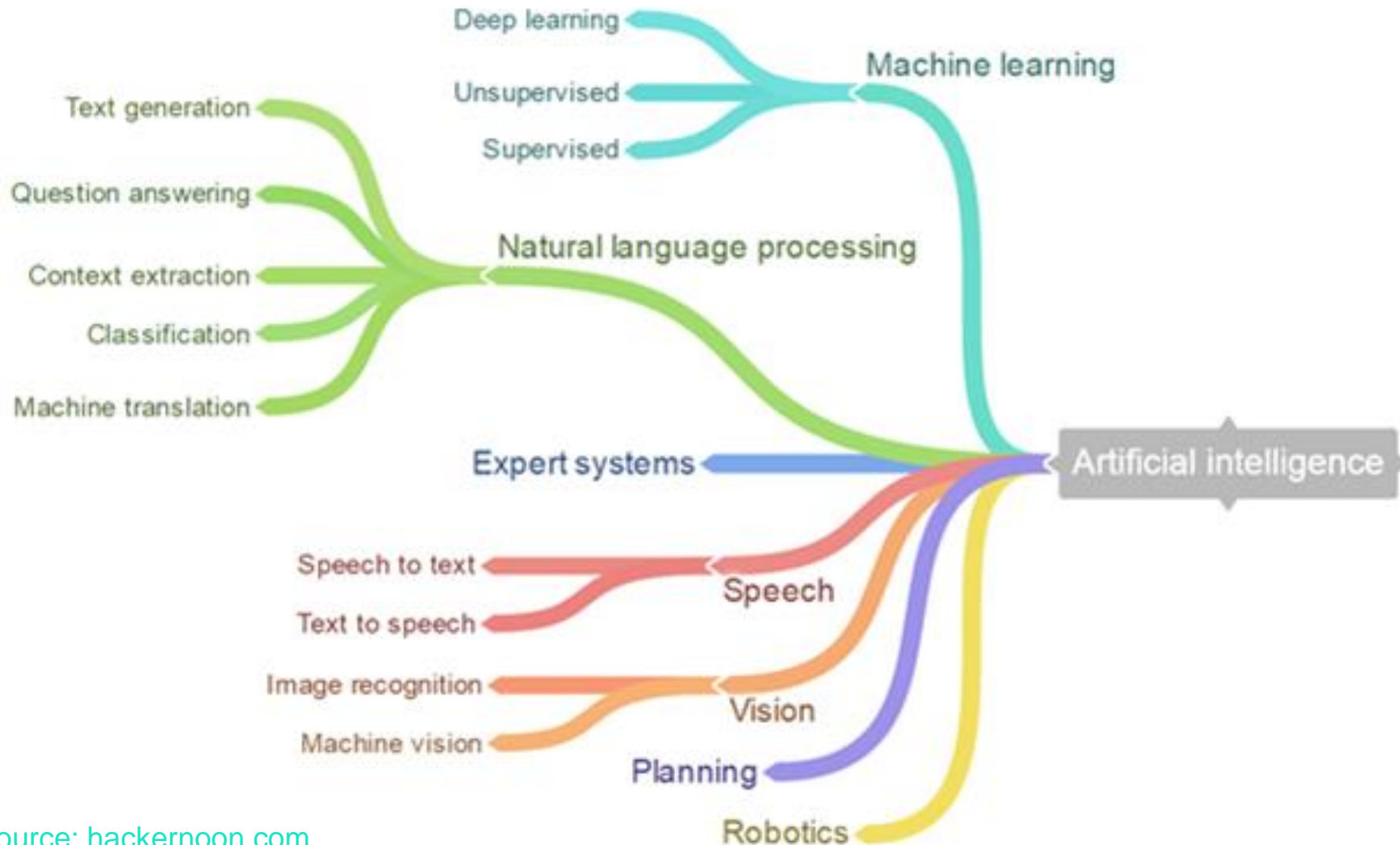


Deep Learning (DL / Neural Networks)

(machine figures out features)



Artificial Intelligence (AI) technical overview



Source: hackernoon.com

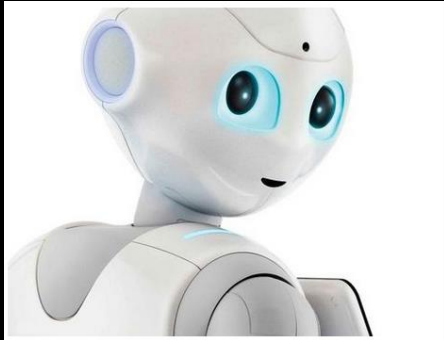
Artificial Intelligence (AI) helps in building **systems** that can do **intelligent** things

Subset of AI are:

- **Machine Learning (ML)** helps in building systems that can learn from experience
- **Natural Language Processing (NLP)** helps in building systems that can understand language

When NLP and ML are used together, it helps in building systems that can learn how to understand language

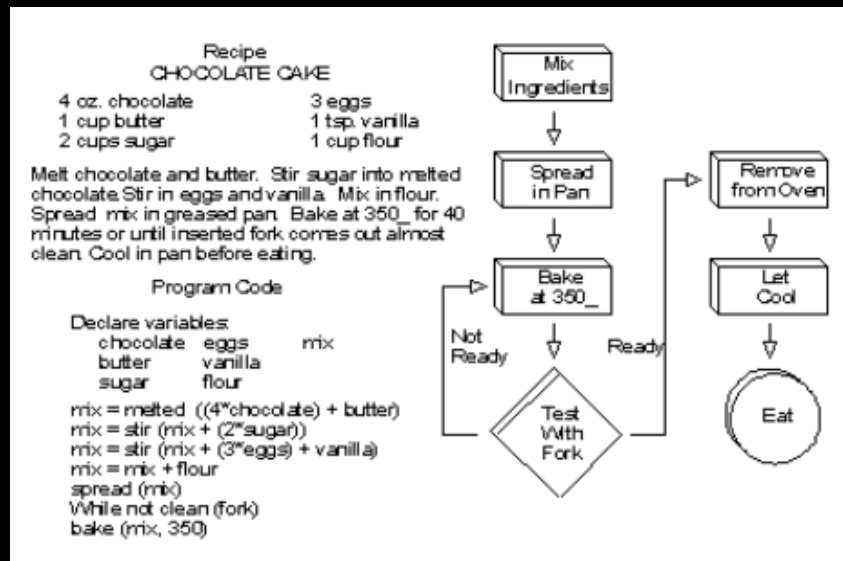
Artificial Intelligence in real life

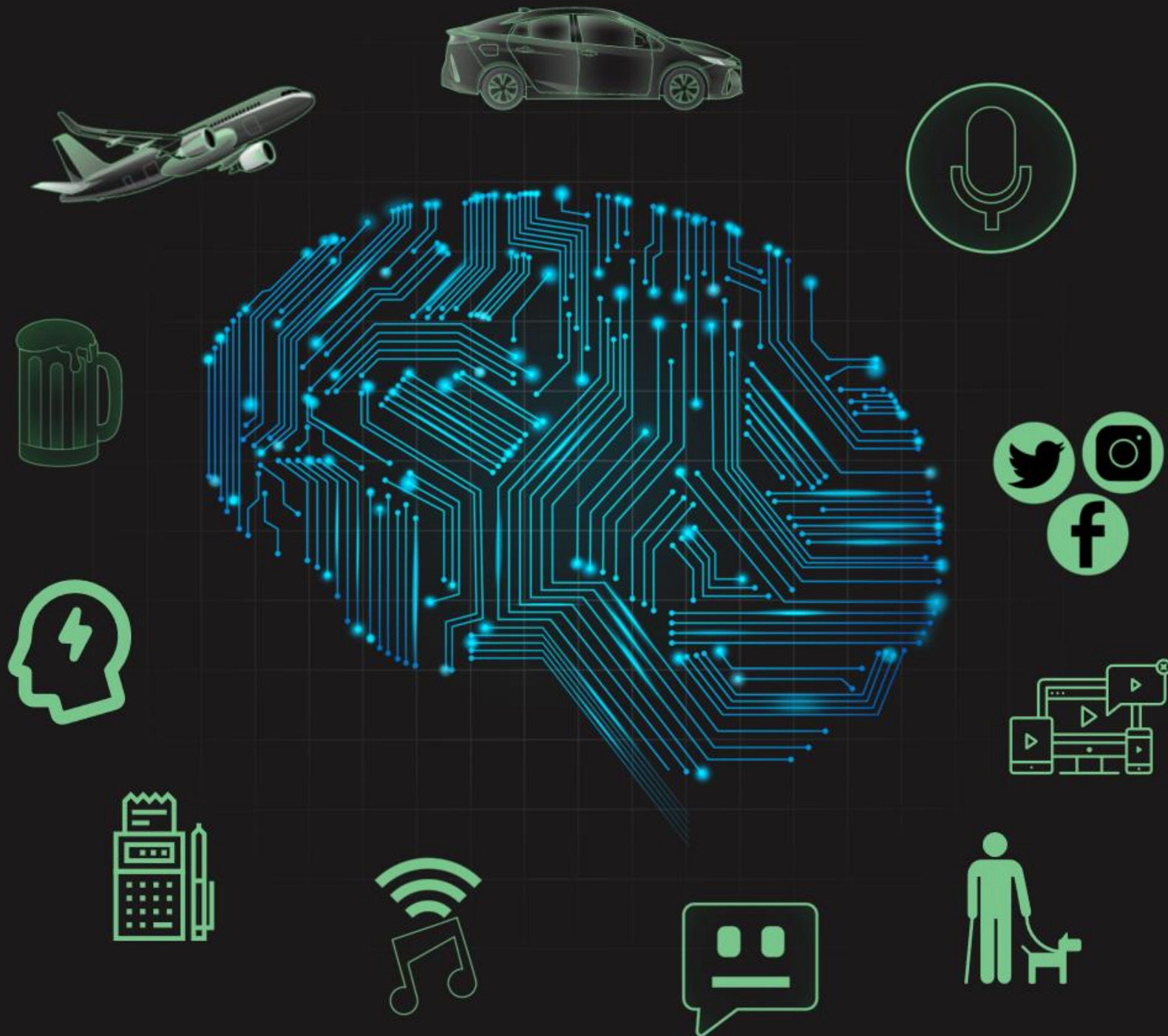


Robot 'Peppert' wordt als proef ingezet om burgers wegwijz te maken in de Stadswinkel.
Foto: foto gemeente rotterdam

'Peppert' wordt Ingezet als ambtenaar

Robots maken Rotterdammers wegwijz





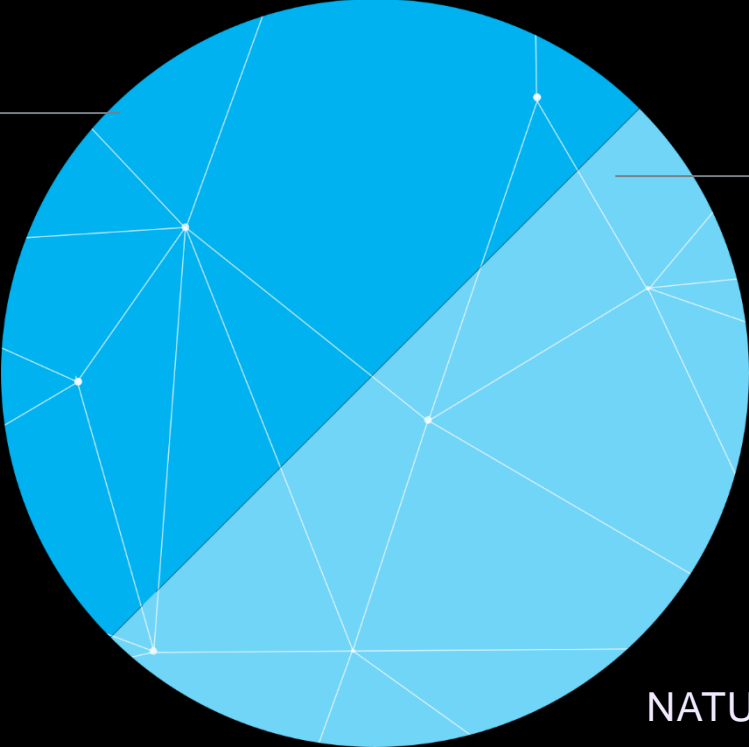
Surprising ways you **interact** with A.I. every day

- Commercial Flights
- Voice assistants
- Ride booking, sharing & planning
- Social Media
- Advertising
- Social services
- Chatbots
- Music streaming
- Tax assessment
- Knowledge management
- Crop care

AI/Cognitive systems are creating a new partnership between humans and technology

Humans excel at

- COMMON SENSE (but with many biases)
- MORALS
- IMAGINATION
- COMPASSION
- DILEMMAS
- ABSTRACTION
- DREAMING
- GENERALIZATION



Cognitive Systems excel at

- LOCATING KNOWLEDGE
- ELIMINATING BIASES
- PATTERN IDENTIFICATION
- MACHINE LEARNING
- NATURAL LANGUAGE PROCESSING AT SCALE
- PROVIDING ENDLESS CAPACITY

Bradesco

With over 5,200 branches, Bradesco is one of Brazil's largest banks. In a business as competitive as banking, if your customers don't have a great experience, they may not be your customers for long. So, Bradesco started looking for a way to increase the speed of service and also improve the experience for each client. That's where

Watson was trained in

Allianz Taiwan

Allianz wanted a platform to bet

Results

Allie was created with customers in mind. 80 percent of the

- Allie resolves 80 percent of customer inquiries in under 1 minute.
- There is a 1-to-2 minute resolution time to request a policy loan.
- Customers have a seamless experience 24/7.

Royal Bank of Scotland



The Royal Bank of Scotland has paved the way for banking innovation ever since it was established in 1727. From the world's first mobile banking app,



Facing its own path toward digital transformation, Sprint started preparing its data for AI, with the goal of using machine learning to gain quicker insights and a virtual agent to engage

AI
the



Japan Airlines decided to set a new standard for customer service. As a pilot project, they built an application called Makana-chan.

Results

Makana-chan, which uses IBM Watson Developer Cloud in the IBM Cloud, can be accessed by smartphone or computer. Makana-chan's chat dialog interface understands free-form questions from customers and responds appropriately, thanks to IBM Watson Assistant and IBM Watson Natural Language Classifier products.

agent. The solution used natural language processing and deep learning to understand customer intent behind inquiries.

the next

all center staff

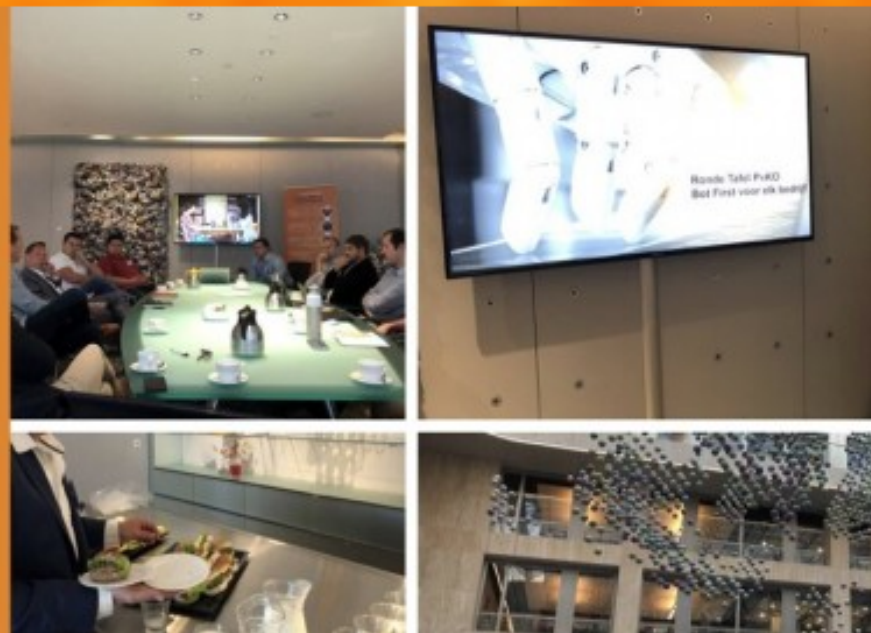
so that agents can focus on

Humana



Watson to answer the phone and handle the top 5 intents of providers.

Humana, a health and wellbeing company focused on community wellness, partnered with IBM, and using IBM Watson Assistant, co-developed the ability for



vrijdag 27 september 2019 20:07

Door Judith de Jong

Labels

Hoe helpen we de klant met een 'bot first approach'?

Foute antwoorden op vragen en verkeerde interpretaties door de bot waren dagelijkse ergernissen van klanten. De eerste bots gaven alleen antwoorden die waren geprogrammeerd. Langzaam zien we de bot gelukkig steeds slimmer en productiever worden en kunnen we nadenken over hoe we met de inzet van bots de klant nóg beter kunnen bedienen. Hoe slim kunnen we die bot maken en wat zijn de uitdagingen die we tegenkomen bij de zogeheten 'bot first approach'?

Our Strategy: The Ladder to AI



Reimagine your workflows

TRUST: Achieve trust & transparency

Protect your insights

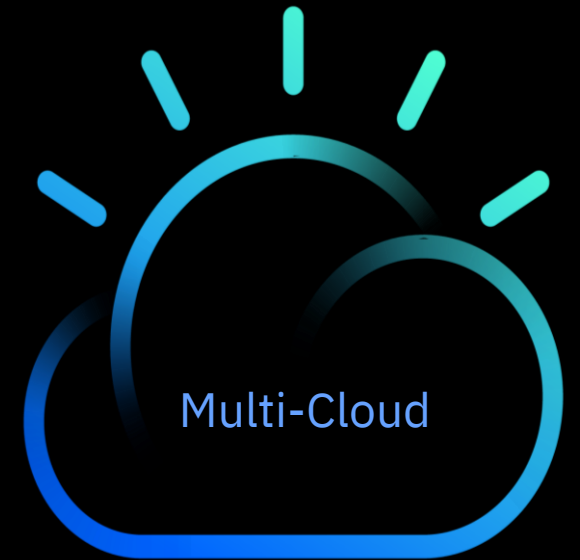
AUTOMATE: Apply ML Everywhere

ANALYZE: Scale insights on demand

Make your data ready for AI

ORGANIZE: Create a trusted analytics foundation

COLLECT: Make data simple & accessible



Modernize for simplicity & agility

Data of every type, regardless of where it lives



There is no AI without an IA (information architecture)

80%

of data is either
inaccessible,
untrusted or
unanalyzed

81%

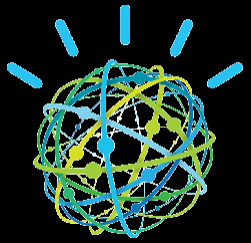
do not
understand the
data required
for AI

“

No amount of AI algorithmic sophistication will overcome a lack of data [architecture] ... bad data is simply paralyzing.

A quick tour to the early years: 2011

Watson only knew "Q&A"



Watson Jeopardy
Q&A

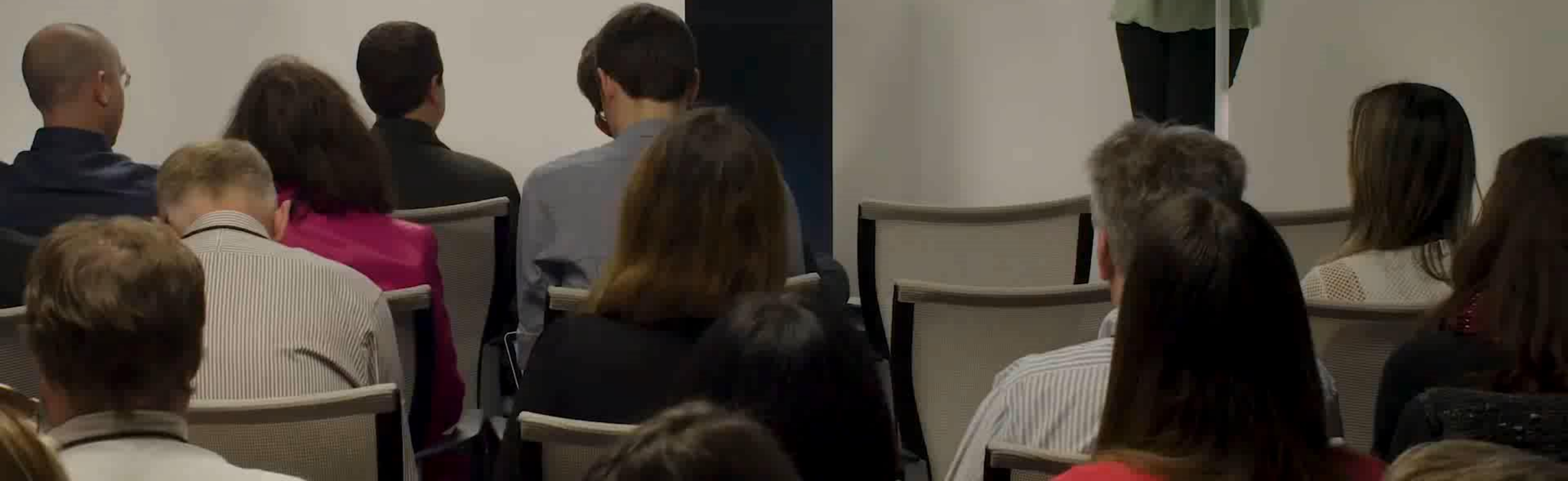


Opening
Rebuttal
Summary

03:50:04

Project Debater

Noa Ovadia



Risks of A.I.



- Lack of transparency - how does a system come to a conclusion?
- Biased Algorithms - you get what you teach
- Self fulfilling prophecy - you get what you measure
- Automation Bias - computer says no/developer preferences
- Fake news, voice, image, video - Lyrebird voice/deepfake image foto/face swap video
- Computational propaganda - scalable fake items and communication, nvidia
- Autonomous weapons - AI capabilities combined
- Privacy - Profiling (obv (zichtbaar) gedrag)
- Hacking Algorithms
- Ransomware as a service
- Technological unemployment - Job replacement and knowledge pressure
- Superintelligence - Gap between system push and actual need
- Loss of skills - Calculation, navigation, Phone numbers, interaction, patience, concentration
- Loss of diversity and creativity

Five Areas of Ethical Focus

01. Accountability

AI designers and developers are responsible for considering AI design, development, decision processes, and outcomes.

02. Value Alignment

AI should be designed to align with the norms and values of your user group in mind.

03. Explainability

AI should be designed for humans to easily perceive, detect, and understand its decision process.

04. Fairness

AI must be designed to minimize bias and promote inclusive representation.

05. User Data Rights

AI must be designed to protect user data and preserve the user's power over access and uses.

Transparency on design choices

- Does the **training dataset** have a datasheet or data statement?
- Was the dataset and model **checked for biases**?
- Was any **bias mitigation** performed on the dataset?
- Are algorithm outputs **explainable/interpretable**?
- Who is the **target user of the explanation** (ML expert, domain expert, general consumer, regulator, etc.)?
- Was the service tested on any **additional datasets**?
- Was the service checked for **robustness** against adversarial attacks?



Project OpenScale

Support Watson Studio,
Machine Learning,
and 3rd Party Frameworks

Payload logging

- Gain insights into model inference
- Logs feed a deployments data mart for monitoring and exploration

Continuous Evolution

- Intelligent re-train and data synthesis triggers for production models
- Define KPI thresholds that trigger model retraining

Operations Dashboard

- Take action on deployed models by understanding payloads and feedback data
- Ensure ongoing model health in business applications

Model Explainability

- Eliminate black box models & allow business users to understand AI outcomes in terms they understand
- Explain models with runtime explainability

Fairness Tests

- Discover model bias through active monitoring
- Ensure models are bias free

Model Ops

- Model metrics can be integrated into common reporting tools linking AI to business and application outcomes
- AI lifecycle orchestration framework to enable AI & IT operational scale



Know your data

Discover, find, integrate, classify, catalog govern all types of data.

Trust your data

- Capture lineage
- Ensure quality of dynamic data
- Stay on top of regulations
- Checked sources
- Mitigated Bias

Use your data

- Build a single source of truth to drive a 360-degree view of your data.
- Unleash insights and deepen customer relationships.

How & Where to start with AI ?

The answer is in the data!

- Show what is already in there
- Think about what data you want to add
- How to get it?
- Be aware of Data Quality issues
- Respect Data Governance
- Personal Sensitive Data / GDPR compliancy

IBM Watson/AI has many faces, what is your use case?

Think Big – Start Small – Improve Fast (and learn)

Data Responsibility @ IBM



IBM co-developed and signed up to the **Data Protection Code of Conduct for Cloud Service Providers**

IBM follows these principles and practices:

1. Our clients data is their own
2. Clients determine where their data is stored and how it is processed
3. We support the use of internationally accepted encryption standards and algorithms
4. All activity is logged and audited to protect your data
5. We support transparency and data governance policies so people understand how an AI system comes to conclusions/recommendations

IBM AI Business Partners in NL oa:

- Axians Amsterdam
- Bold Capital Management
- e-office
- Text Inside
- Viqtor Davis
- Vertical Data Analytics BV
- You-Get BV

Resources:

News Explorer: <http://news-explorer.mybluemix.net>

Discovery demo: <https://discovery-news-demo.ng.bluemix.net>

Visual recognition demo: <https://visual-recognition-demo.ng.bluemix.net/>

Personality Insights demo: <https://personality-insights-livedemo.mybluemix.net/>

Speech to text: <https://speech-to-text-demo.ng.bluemix.net/>

Science behind Watson: <https://www.youtube.com/watch?v=DywO4zksfXw>

Watson science: <https://www.youtube.com/watch?v=DywO4zksfXw>

Project debater: https://www.youtube.com/watch?v=UeF_N1r91RQ

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