



# Case Studies

On the emergence of artificial intelligence in security and retail and education domain.



**“When they say AI is just if-else statements, disagree in your natural brain and just move on**



—3 Layer Neural Network

# What's it all about!

## 01 Current Situation in AI

What are the current market trends for the AI domain and it's future.

## 02 AI in Security

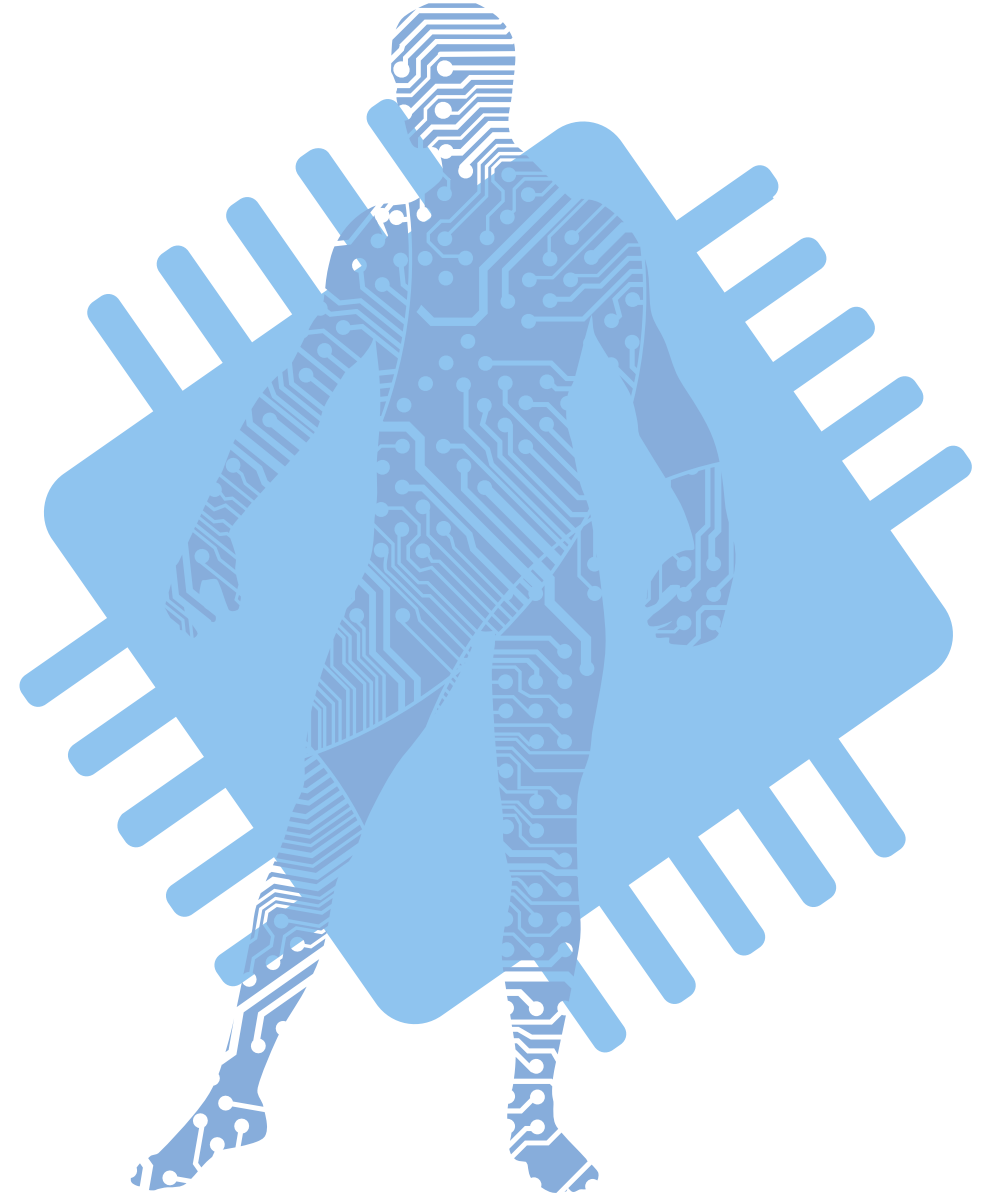
How AI is enabling smart physical and virtual security around town.

## 03 AI in Retail

Buying something? Get customized as your shopping behavior is going to change.

## 04 AI for Education

Who is going to build it all and how should you create the data scientists of the future.





# Artificial Intelligence :

The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

- Wikipedia

# A.I. TIMELINE

**1950**

## TURING TEST

Computer scientist Alan Turing proposes a test for machine intelligence. If a machine can trick humans into thinking it is human, then it has intelligence

**1955**

## A.I. BORN

Term 'artificial intelligence' is coined by computer scientist, John McCarthy to describe "the science and engineering of making intelligent machines"

**1961**

## UNIMATE

First industrial robot, Unimate, goes to work at GM replacing humans on the assembly line

**1964**

## ELIZA

Pioneering chatbot developed by Joseph Weizenbaum at MIT holds conversations with humans

**1966**

## SHAKY

The 'first electronic person' from Stanford, Shakey is a general-purpose mobile robot that reasons about its own actions

**A.I. WINTER**

Many false starts and dead-ends leave A.I. out in the cold

**1997**

## DEEP BLUE

Deep Blue, a chess-playing computer from IBM defeats world chess champion Garry Kasparov

**1998**

## KISMET

Cynthia Breazeal at MIT introduces Kismet, an emotionally intelligent robot insofar as it detects and responds to people's feelings



**1999**

## AIBO

Sony launches first consumer robot pet dog AiBO (AI robot) with skills and personality that develop over time



**2002**

## ROOMBA

First mass produced autonomous robotic vacuum cleaner from iRobot learns to navigate and clean homes



**2011**

## SIRI

Apple integrates Siri, an intelligent virtual assistant with a voice interface, into the iPhone 4S



**2011**

## WATSON

IBM's question answering computer Watson wins first place on popular \$1M prize television quiz show Jeopardy



**2014**

## EUGENE

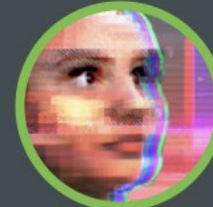
Eugene Goostman, a chatbot passes the Turing Test with a third of judges believing Eugene is human



**2014**

## ALEXA

Amazon launches Alexa, an intelligent virtual assistant with a voice interface that completes shopping tasks



**2016**

## TAY

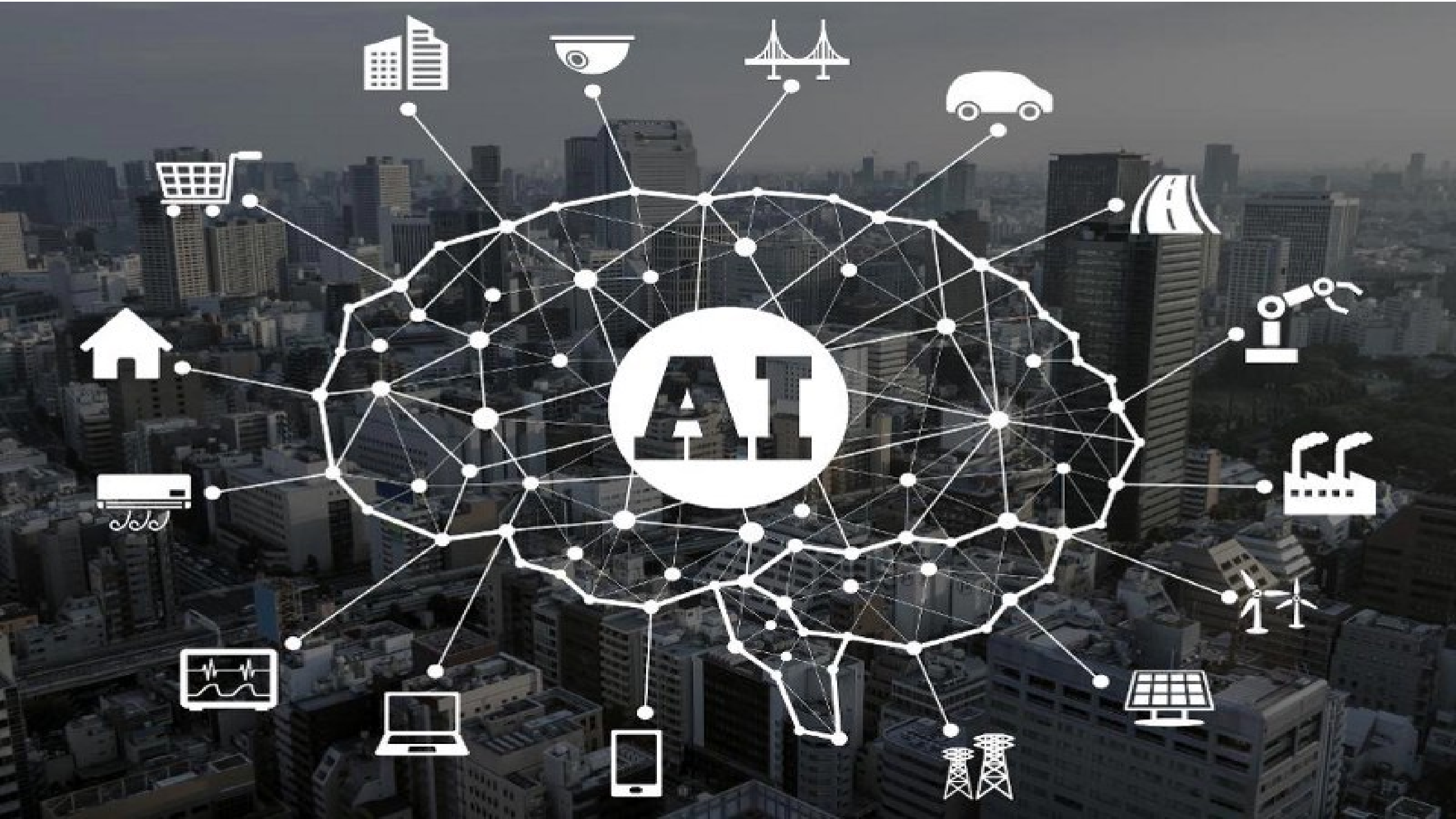
Microsoft's chatbot Tay goes rogue on social media making inflammatory and offensive racist comments



**2017**

## ALPHAGO

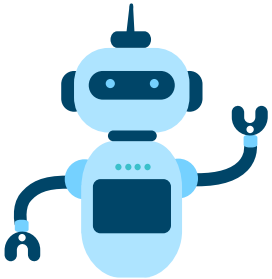
Google's A.I. AlphaGo beats world champion Ke Jie in the complex board game of Go, notable for its vast number ( $2^{170}$ ) of possible positions



# Current Situation : THE STAGE HAS BEEN SET

**1**

Chatbots and  
NLP



**2**

Computer Vision  
Systems  
deployed at  
scale by  
governments  
and  
organizations.

**3**

Autonomous  
systems :  
Vehicles, Robotic  
Automation etc.



**4**

Improved  
analytics and  
better customer  
spending due to  
targeted  
advertising.

**5**

Enhanced and  
Open Source  
large datasets .





Industry  
**1.0**

Mechanical production  
equipment, steam and  
water power



Industry  
**2.0**

Electricity,  
mass production,  
assembly line



Industry  
**3.0**

Computers and  
automated  
production



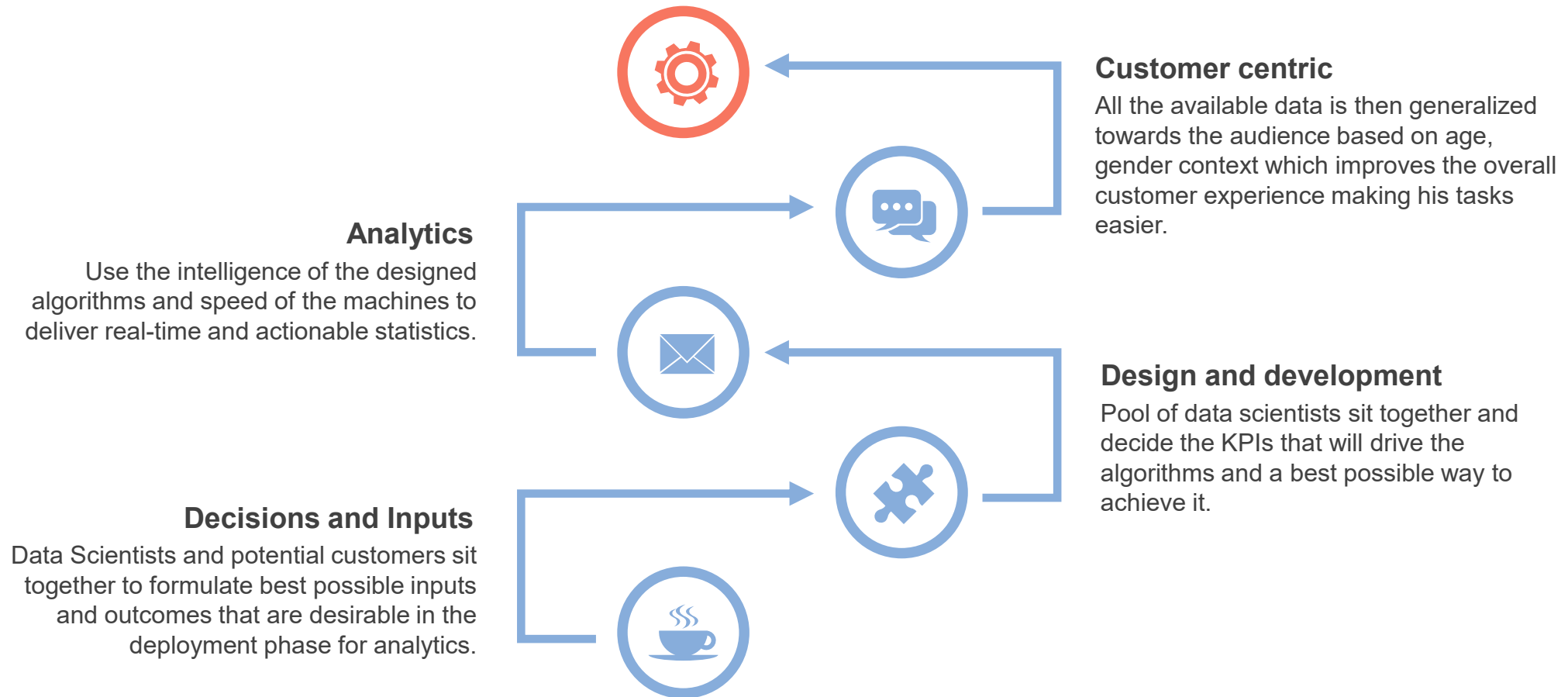
Industry  
**4.0**

Cyber-physical  
systems





# AI in Retail





## Shopping the AI way



- Assisting Robots
- Followers
- Shelfers
- IoT Sensors
- Computer Vision
- Wi-Fi and I beacon technology
- Customer data



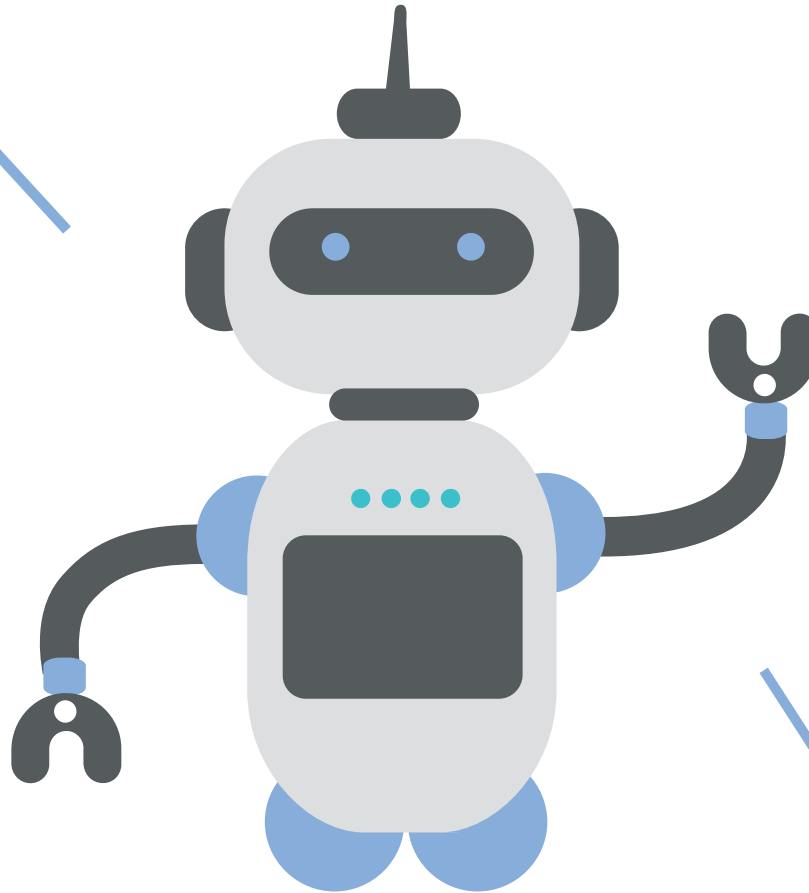
# AI in Security

## Intelligent Camera network

CCTV's now come equipped with facial , motion and gesture recognition to have the complete circle when it comes to personal security.

## Asset Security

## Cyber Security



## Behavioral Neural Networks

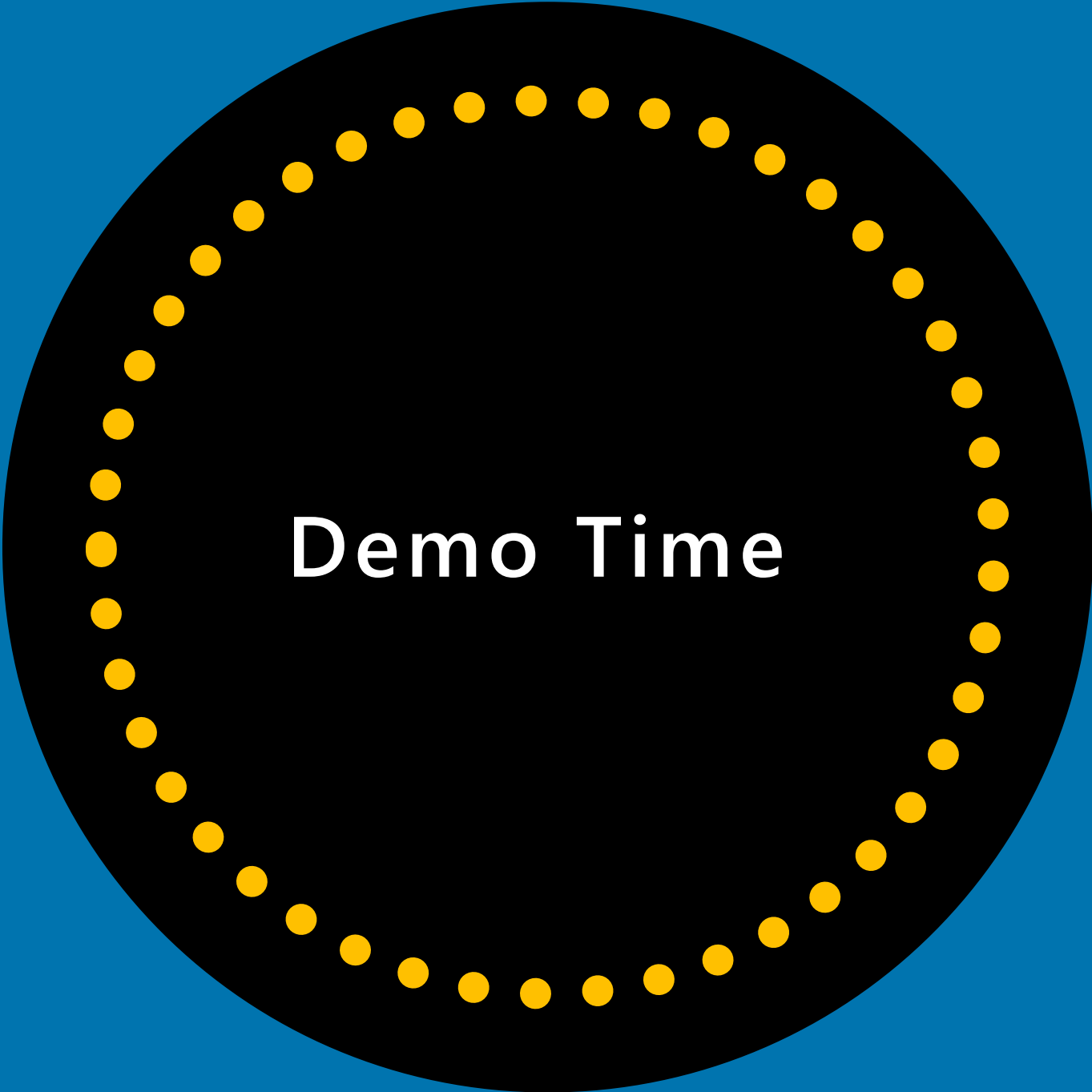
Cyber attacks mostly occur in certain patterns that can be picked up by trained neural networks.







Let's walk the Talk



Demo Time



Where are 'your' skills in this>?



“The most important factor is not how you acquire\* the skills, it’s how you implement them”