



# The Role of Sensors, Big Data, and AI in Improving Health

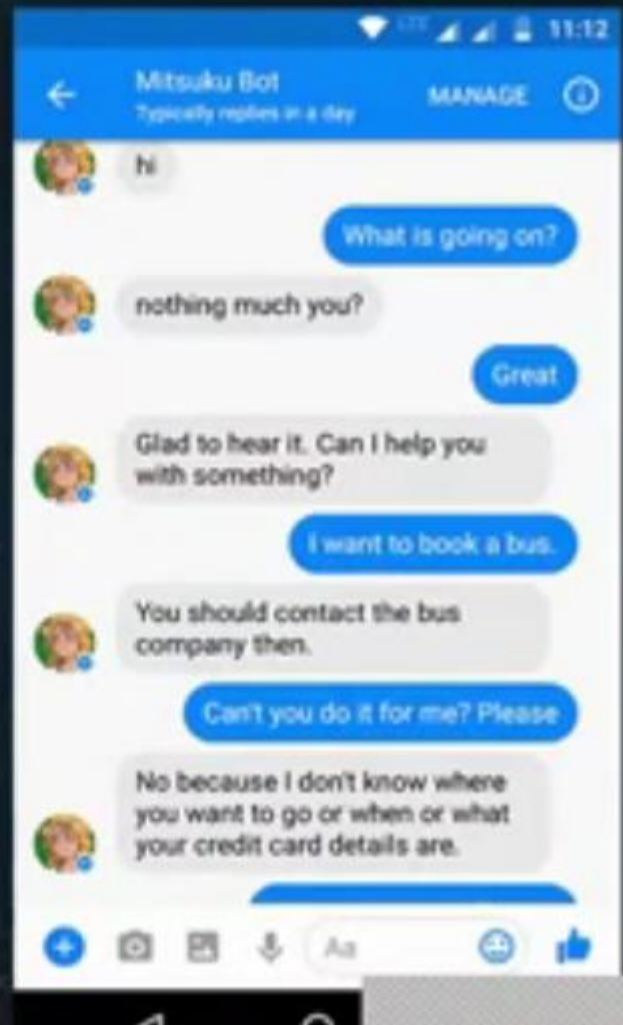
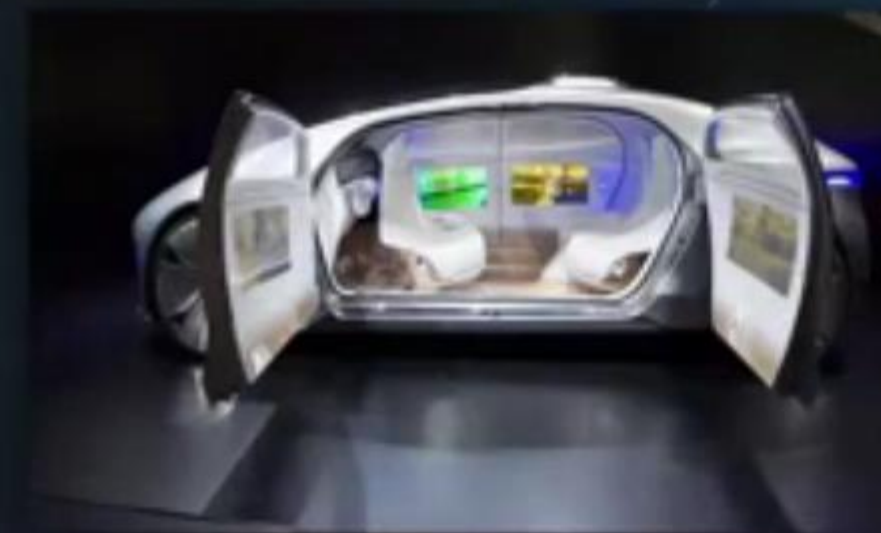
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Officer

# ¿What is **Artificial Intelligence (AI)**?

Pulsa **Esc** para salir del modo de pantalla completa



# Two Extremes: AI will exterminate us or saves us



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"With AI we are summoning the Devil"

- Elon Musk



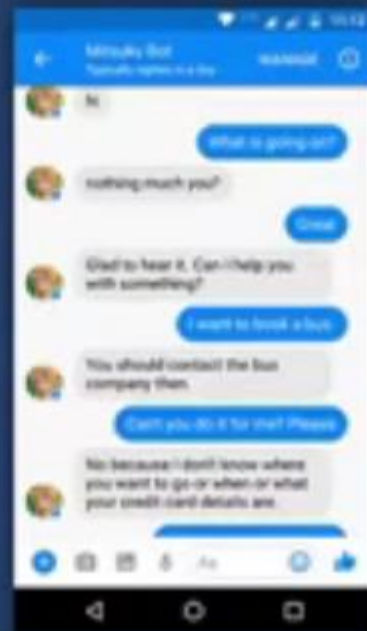
"AI would be the ultimate version of Google. The ultimate search engine that would understand everything on the Web. It would understand exactly what you wanted, and it would give you the right thing."

- Larry Page

## General AI (or Hard AI)



## Narrow AI (or Soft AI)



Advanced Analytics / Data Science

Optimization  
(Operations  
Research)

Statistics  
(Inferencia)

Simulation


Narrow AI (or Soft AI)

Machine Learning

Natural  
Language  
Processing

Deep Learning  
(what is today  
usually refered  
to when one  
hears AI)

Robotics

The background features a dark blue gradient with intricate, glowing green and purple lines that resemble neural connections or data paths. A faint, glowing brain-like structure is visible in the upper right quadrant. In the bottom right corner, there are two overlapping grey rectangular shapes.

**Artificial Intelligence (AI)**

VS

**Human Intelligence (HI)**



# HI VS AI

Human Intelligence

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**Why will  
something  
happen?**

CAUSALITY

Artificial Intelligence

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**What will  
happen?**

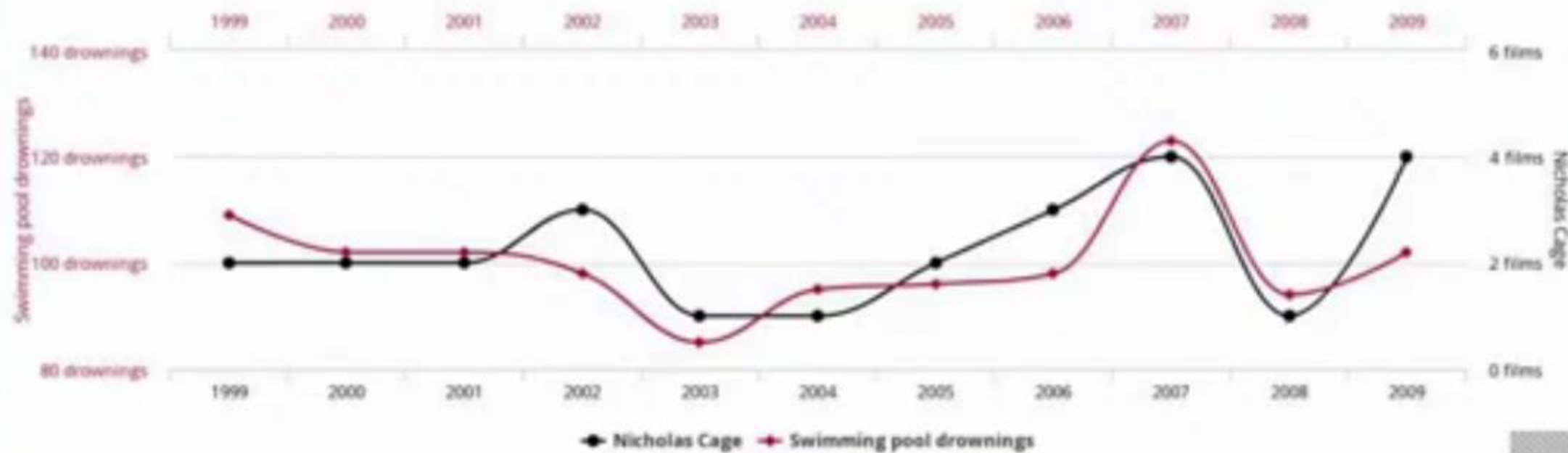
PREDICCIÓN

# Correlation is not causation



# Correlation is not causation

Number of people who drowned by falling into a pool  
correlates with  
Films Nicolas Cage appeared in



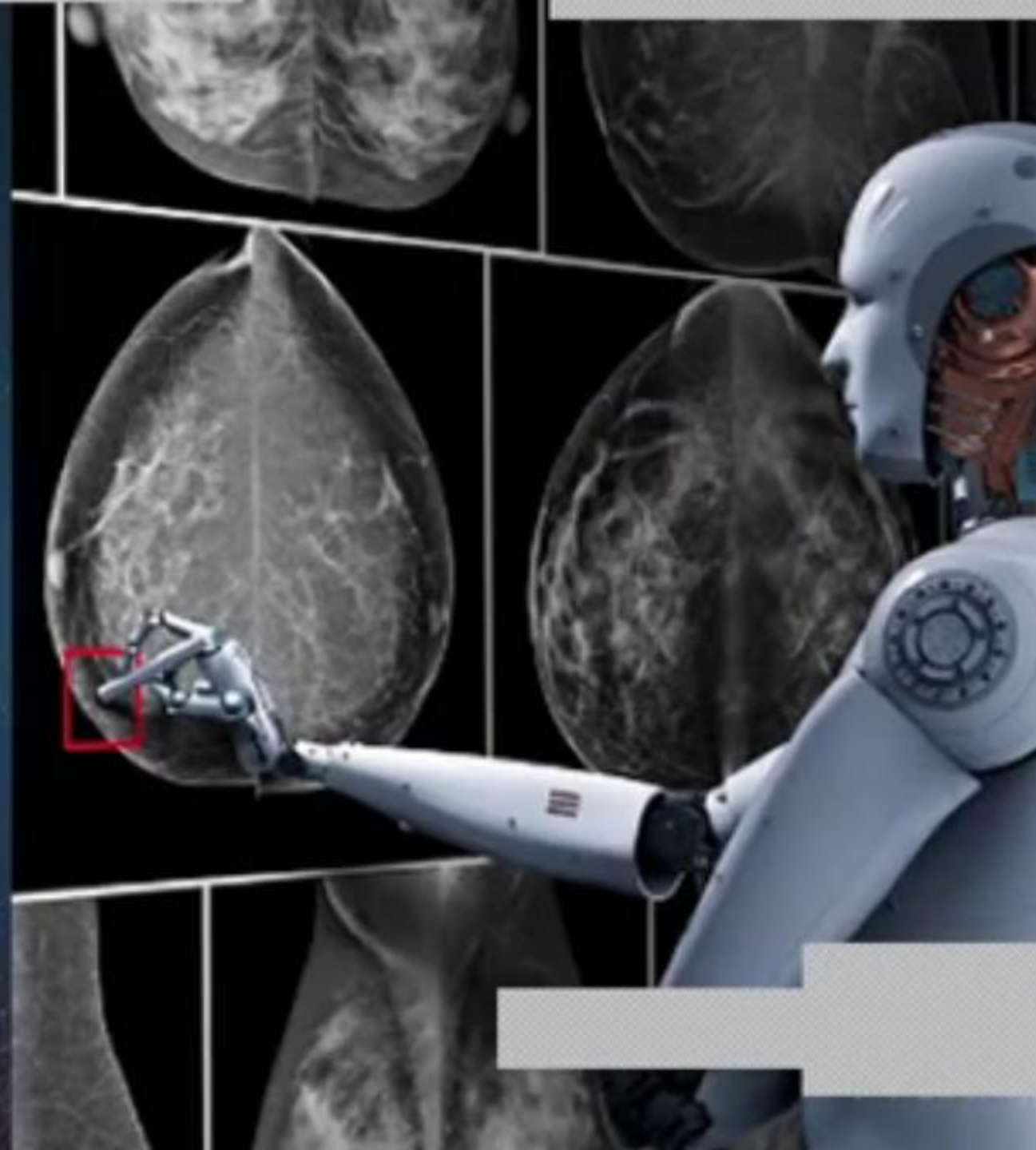
# The importance of Sensors, Big Data, and AI in improving Health Decisions



Sensors)  $\times$  (Data  $+$  Models)  $\times$  Decisions  $=$  Improved Health Outcomes



# Predicting High-Risk Lesions (HRL) from Mammograms




# Using AI, Sensors, and Big Data to address Covid



# Using **AI** to improve Health



Ambient Intelligence



**Thanks**  
¿Questions?