

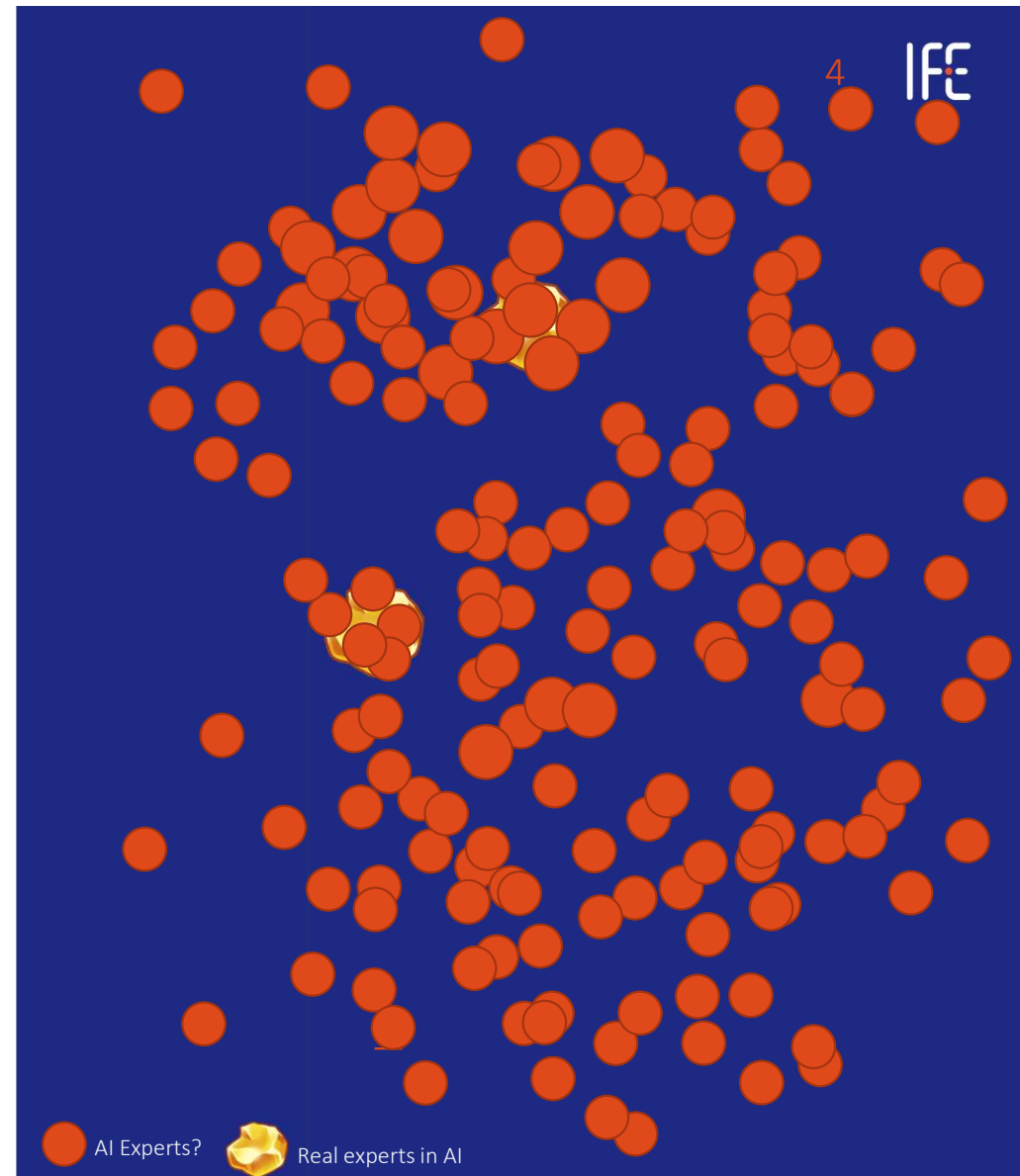
# Today it is warm...again

- But with a cold draft
  - Large Promises
  - AI Experts without track record appear everywhere.
  - Attract funds by adding AI to your startup name
  - Opportunistic name changes (e.g. statistics becomes AI)
- But AI it is here to stay due to
  - Data,
  - Computation Power
  - (Algorithm maturity)



## Be sceptic

- AI company
  - Do you have customer(s)?
  - Do you have a finished product?
  - Does the product actually apply AI?
- Research Institute/University
  - How many full-time AI researchers?
  - How long have you focused on AI?
  - Show me something you did.

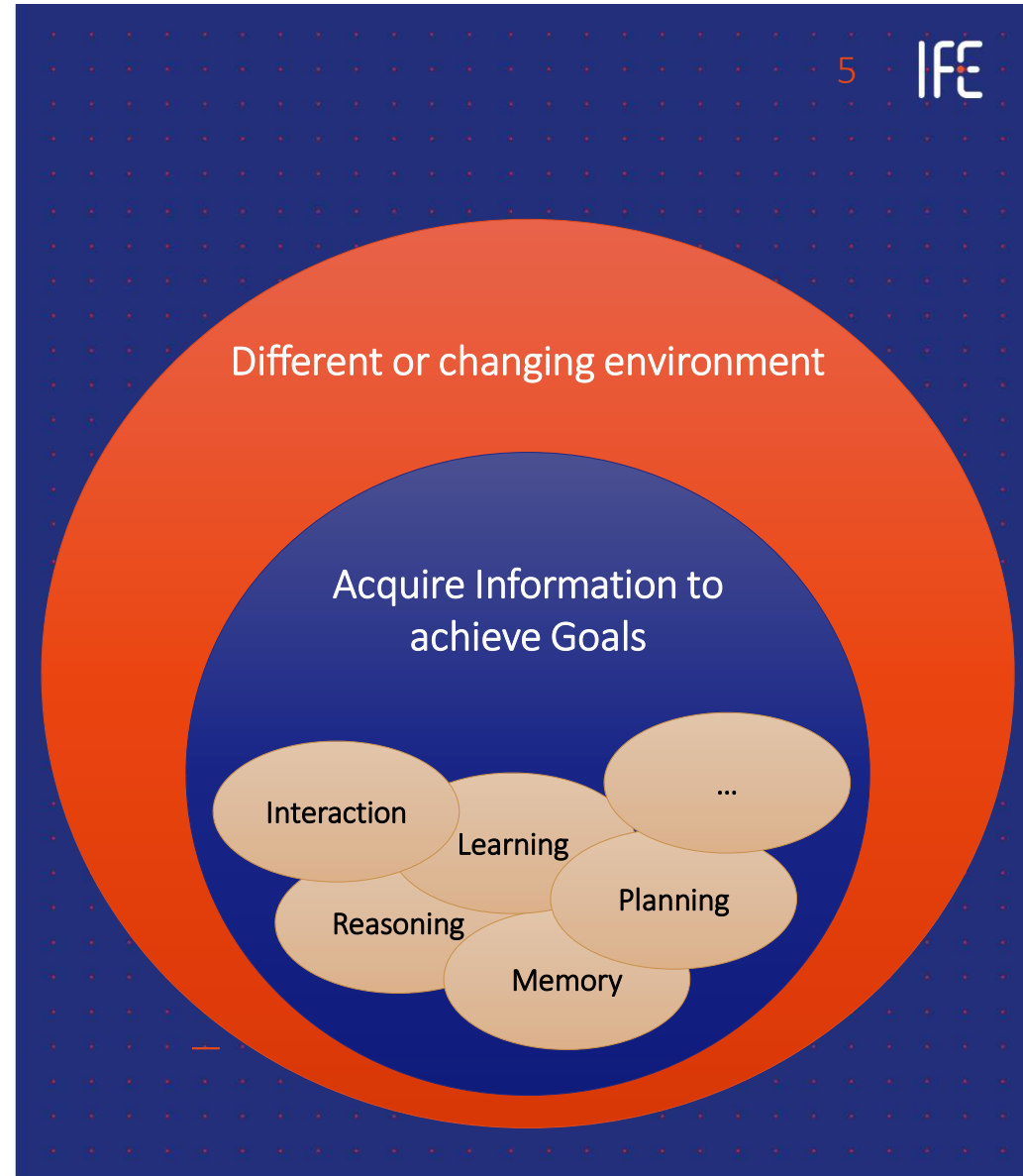


# Artificial Intelligence

 *demonstrated by  
machines and software*

*“Machine* 

**Problem:** No common agreed definition on Intelligence.



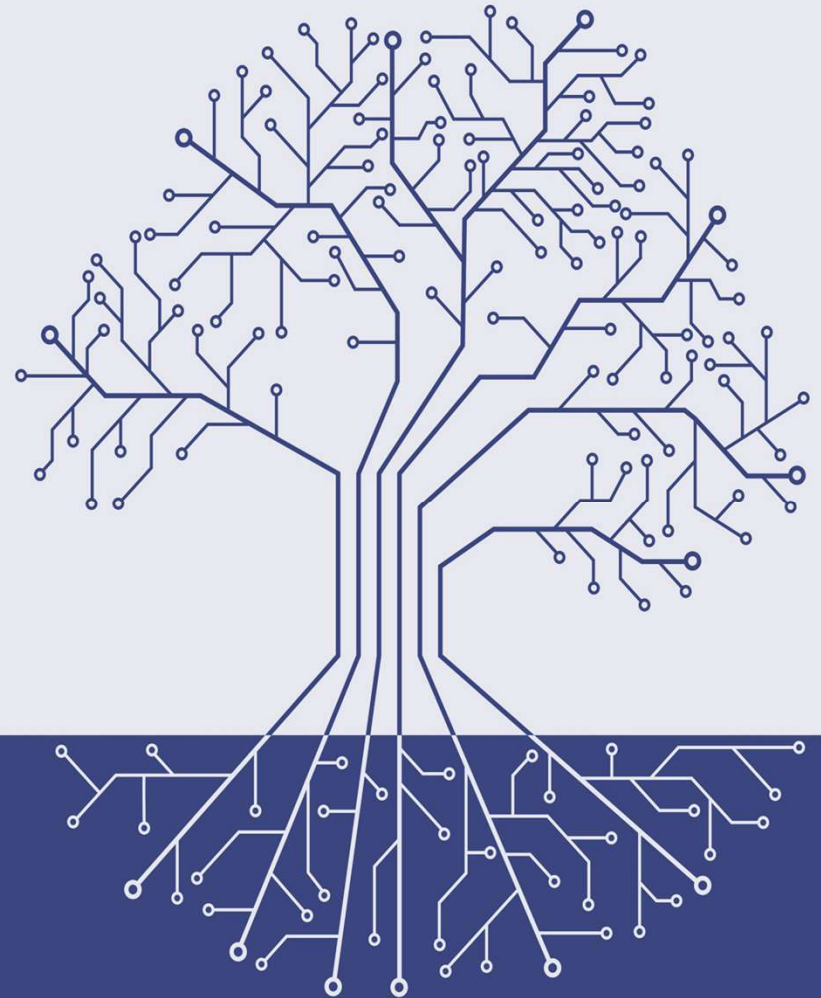


Alan Bundy (Ed.)

# Artificial Intelligence Techniques

A Comprehensive Catalogue

Fourth, Revised Edition



AI

## Symbolic AI

- Models make sense to humans
- Use logic reasoning and Heuristics
- White box (e.g. expert system)



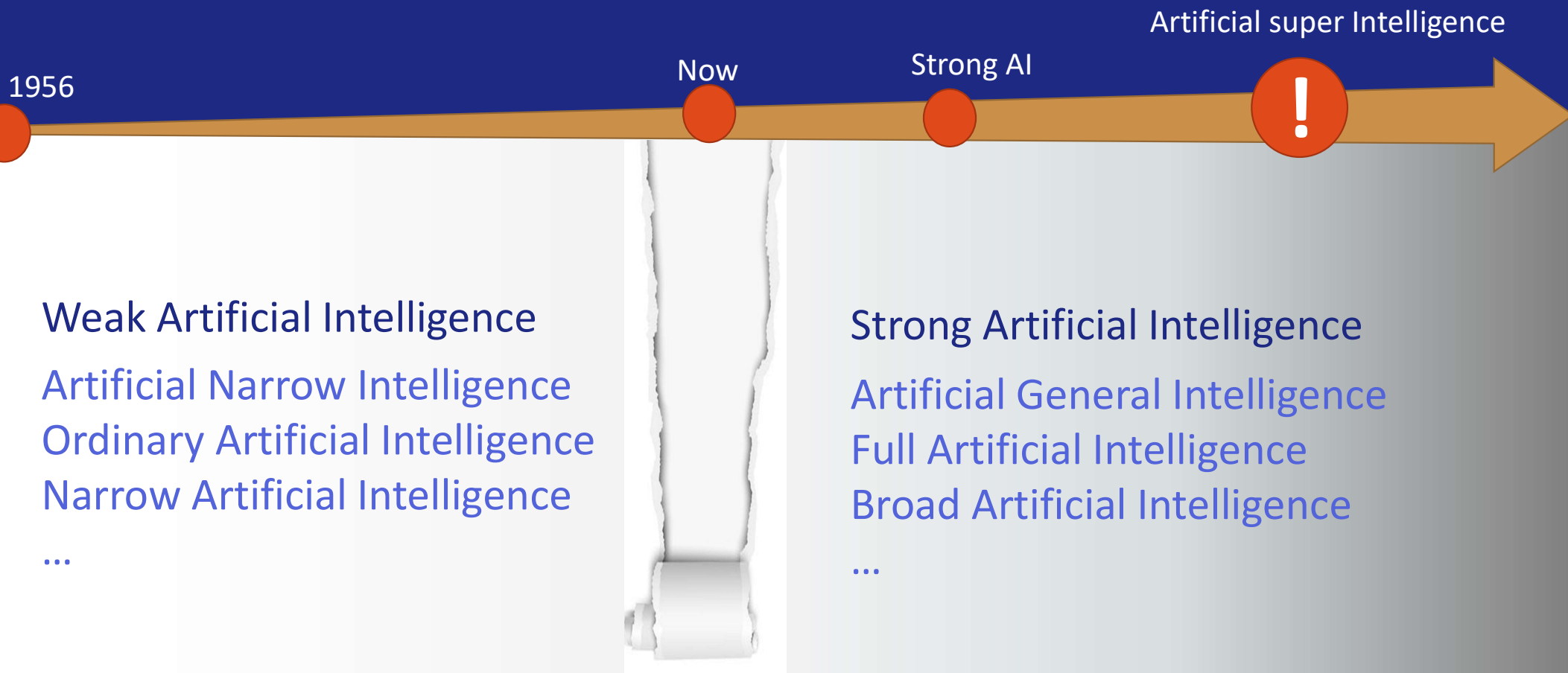
## Subsymbolic AI

- Modelling the problem is inspired by the neuron.
- Black box (e.g Neural Network)



## Current AI

## Future AI





# Example of Artificial Intelligence: Self-driving Cars





## Early Driverless Car in 1971

<https://youtu.be/5ocvNxjN3dc>



Watch Later



Share



Info



MORE VIDEOS



0:00 / 0:48



YouTube



# Self-driving cars, the start and the pioneer



Scientist Ernst Dickmanns



1986:

- The 5-ton van 96 Km/h



1995

- 1700 km on the autobahn from Bavaria to Denmark, reaching speeds of 175 km/h

# DARPA Grand Challenge

## 2004



On a 240 km desert route

15 teams participated

### Results

- 2 withdrawn before the race
- None finished
- Best managed 11,9 km out of 240 km



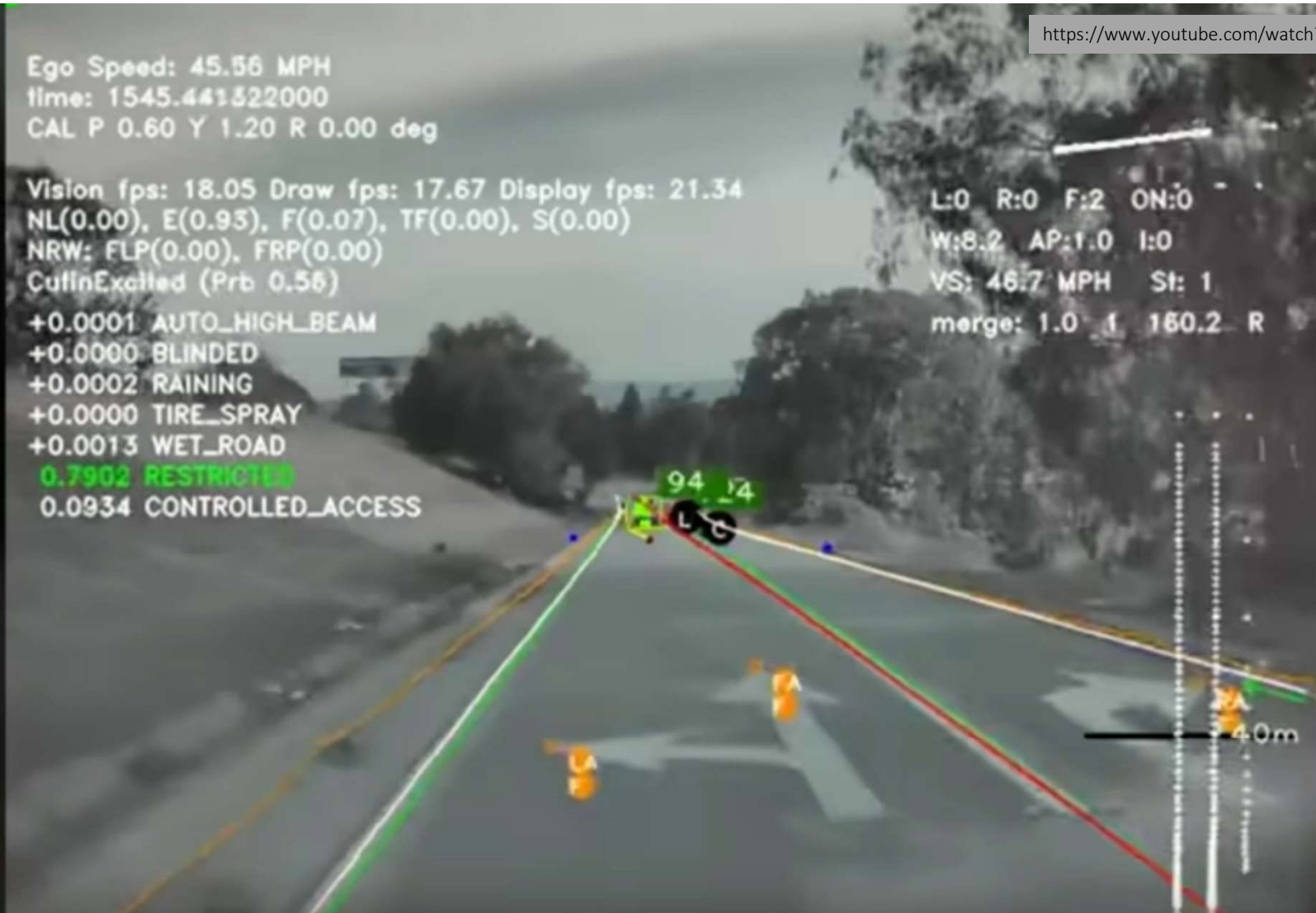


Ego Speed: 45.56 MPH  
Time: 1545.441322000  
CAL P 0.60 Y 1.20 R 0.00 deg

Vision fps: 18.05 Draw fps: 17.67 Display fps: 21.34  
NL(0.00), E(0.95), F(0.07), TF(0.00), S(0.00)  
NRW: FLP(0.00), FRP(0.00)  
CuffInExceeded (Prb 0.56)

+0.0001 AUTO\_HIGH\_BEAM  
+0.0000 BLINDED  
+0.0002 RAINING  
+0.0000 TIRE\_SPRAY  
+0.0013 WET\_ROAD  
**0.7902 RESTRICTED**  
0.0934 CONTROLLED\_ACCESS

L:0 R:0 F:2 ON:0  
W:8.2 AP:1.0 I:0  
VS: 46.7 MPH St: 1  
merge: 1.0 1 160.2 R



Play (k)



0:00 / 0:31

What does it look like today?

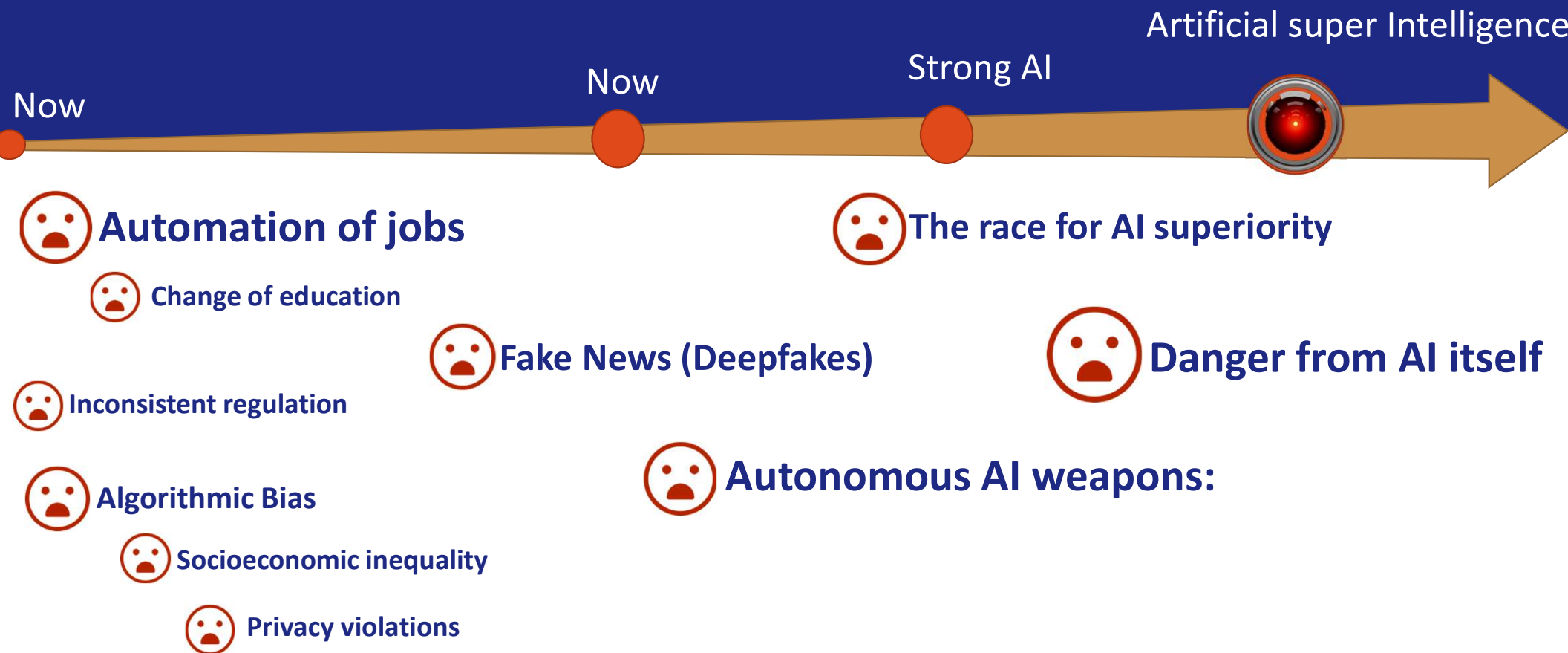


<https://www.youtube.com/watch?v=vfirAm1ITMo>



**AUTONOMOUS Mercedes DRIVE?! Level 3**

# AI for bad





# AI for good

Artificial super Intelligence





# Small Magic Show

## AI chatt

[ChatGPT \(openai.com\)](https://openai.com)

## Image generator

[Dall E 3](#) or [Dall E 3](#)

## Music generator

[AIVA](#)



# Summary

- AI has a long history and is hyped
- People mix science and fiction
- AI does bad or good, it is a tool
- Something special has happened the last 2 years
- AI is here to stay, and the next 5 years will be a wild ride!



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