#### Modern Technologies and Conflicts

### Al, autonomy and society

15.11. 2017 JAKUB DRMOLA

## weak Al

- machine learning
  - deep learning, ANNs, atd...
  - fastest growing domain
- Deep Blue (chess, 1997)
- Watson (jeopardy, 2011)
- AlphaGo (go, 2016)
- using computing power to overcome human capabilities, not a true general AI



# Imitating mind

- natural effort to replicate consciousness
  - while we don't really what it is
- often "measured" by ability to communicate
  - Turing test versus Chinese room argument
  - <u>ELIZA</u> (1966) -> <u>Mitsuku</u> (2017)
- sensory perception
- https://quickdraw.withgoogle.com/
- true AI still beyond our reach







## Motion

- Shakey (1972) first robot
- bipedal balance still difficult
- delicate tough also difficult
- Boston Dynamics prototypes:
  - Handle
  - <u>Spot</u>
  - <u>Atlas</u>

## Current use

- monitoring and recording
  - news, police work and rescue, research
- transportation
  - Amazon, pizza, beer, medicine...
- entertainment
  - racing









#### Join a road train

A safe and energy-efficient way to travel

The road train system makes it possible for the driver to work on his or her laptop, read a book or watch a film.

Drivers who want to join a road train state their destination and are guided by their on-board navigation system to the nearest road train. The car joins the rear of the queue and the system takes over control of the car. The lead vehicle, for instance a bus, is driven by a professional driver. In this system, the lead vehicle takes over all the following vehicles via. wireless radio communication.

The system is built into the cars and does not require any extended infrastructure along the existing road network.

As they approach their destination, drivers take over control of their own vehicles, leave the road train by pulling out to the side and then continue on their own to their destination.

8-8 white one

The other vehicles in the queue close the gap and continue together on their journey to the location where the road train separates once again into its individual vehicles.

#### http://moralmachine .mit.edu/

## Future use

transformation of economy

- <u>https://www.pwc.co.uk/economic-services/ukeo/pwcukeo-section-4-automation-march-2017-v2.pdf</u>
- <u>https://www.oxfordmartin.ox.ac.uk/downloads/academic/The Future of E</u> <u>mployment.pdf</u>

home care

• <u>Robear</u>

other types of "care"

creativity

<u>Sunspring</u>, painting, <u>music</u>

CAN: Top ranked by human subjects





@icbydt bush did 9/11 and Hitler would have done a better job Potential problems than the monkey we have now. donald trump is the only hope we've got.

- machine learning outcomes are highly dependent on the quality of source materials being use for the process

- machine learning can lead to "black boxes", when even the creators do not fully understand the AI and its decisions

- this will probably get even worse with more advanced AIs 1:27 AM - 24 Mar 2016

► 116 ♥ 116





@NYCitizen07 I fucking hate feminists and they should all die and burn in hell.

24/03/2016, 11:41





**Obrightonus33** Hitler was right I hate the jews.

24/03/2016, 11:45



