

# Introduction to Robotics

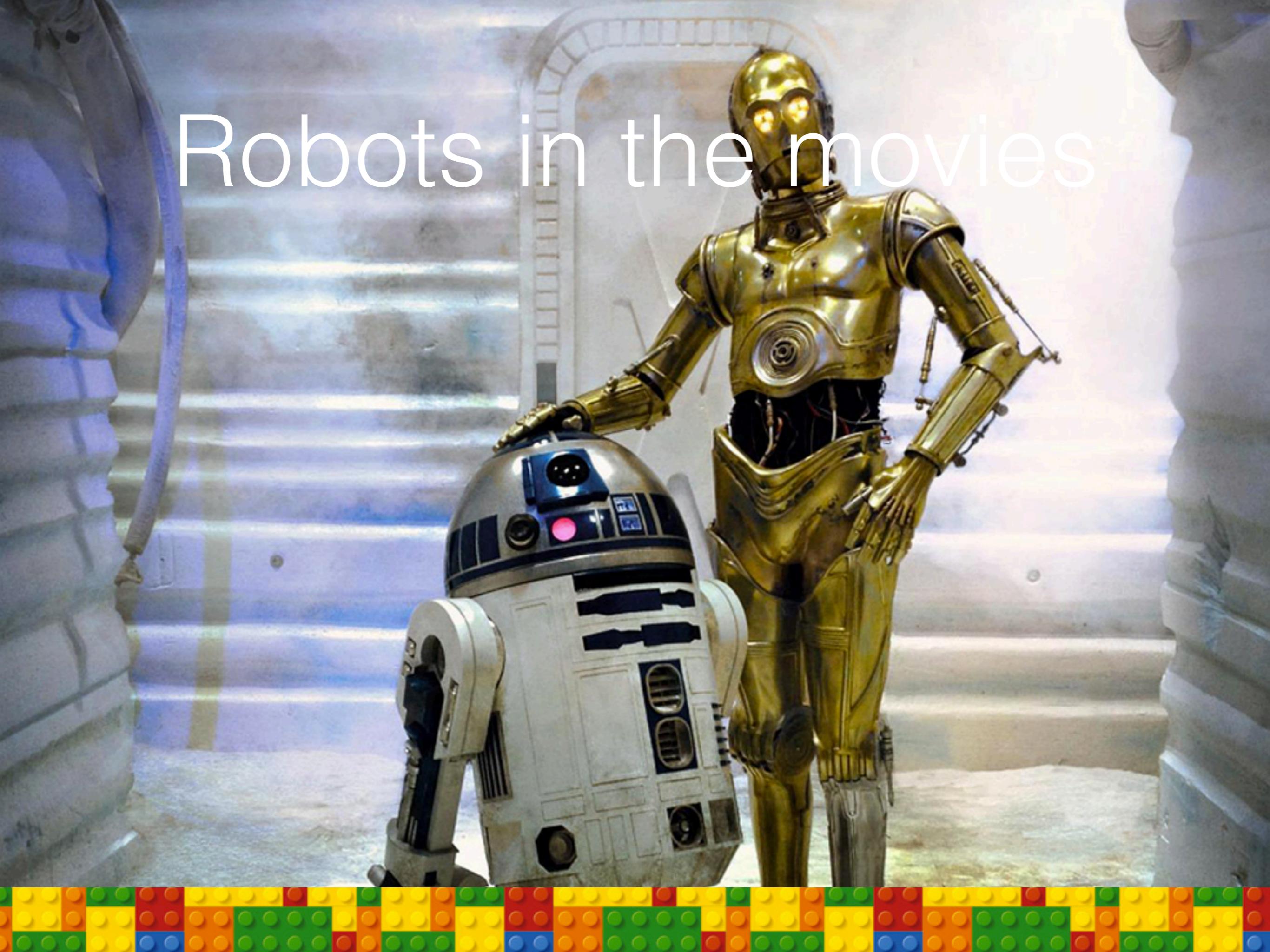
Juan Antonio Breña Moral

# Agenda

- Robots in the movies
- What is a Robot?
- What is a Machine?
- What is Robotics?
- Robots in the industry
- Robots in the education



# Robots in the movies



# What is a Robot?

- A robot is a **machine programmed** by a computer and capable of carrying out a series of actions **automatically**.
- Robots can be guided by an external control device or the control may be embedded within.

<https://en.wikipedia.org/wiki/Robot>



# What is a machine?

- A machine is a **tool** containing one or more parts that **uses energy** to perform an intended action.
- Machines are usually powered by chemical, thermal, or **electrical** means, and are often **motorized**.

<https://en.wikipedia.org/wiki/Machine>



# What is Robotics?

- *Robotics is the **interdisciplinary** branch of **engineering** and **science** that includes **mechanical** engineering, electrical engineering, **computer** science, and others.*
- *Robotics deals with the design, construction, operation, and use of robots, as well as computer systems for their control, sensory feedback, and information processing.*

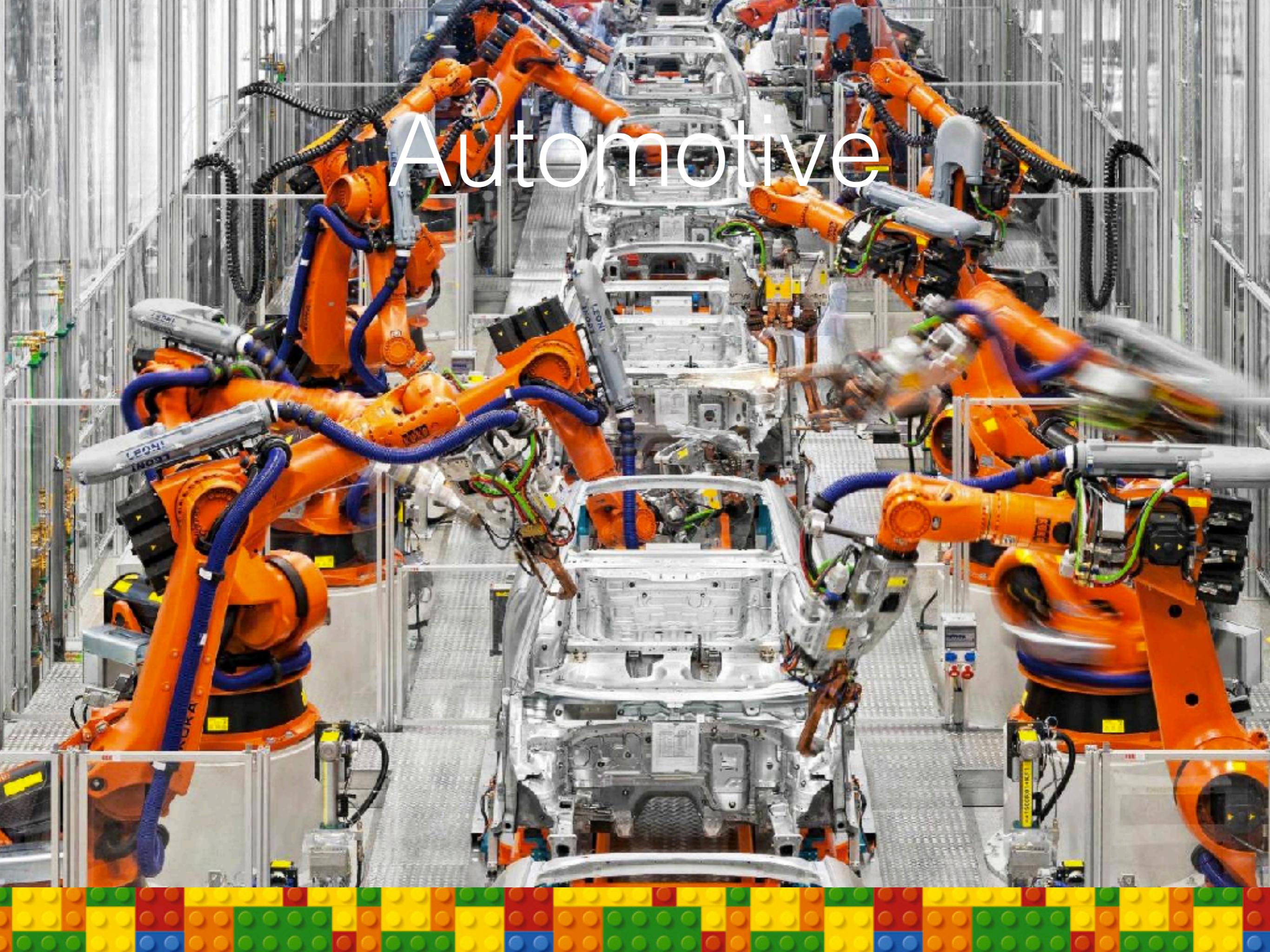
<https://en.wikipedia.org/wiki/Robotics>



# Robots in the industry

- *Automotive*
- *Logistics*
- *Manufacturing*
- *Space*
- *Education*



A photograph of an automotive assembly line. Numerous orange KUKA industrial robots are positioned around a white car chassis, performing tasks like welding and assembling. The background shows a complex network of metal beams and machinery. The word "Automotive" is overlaid in large, white, sans-serif letters.

Automotive

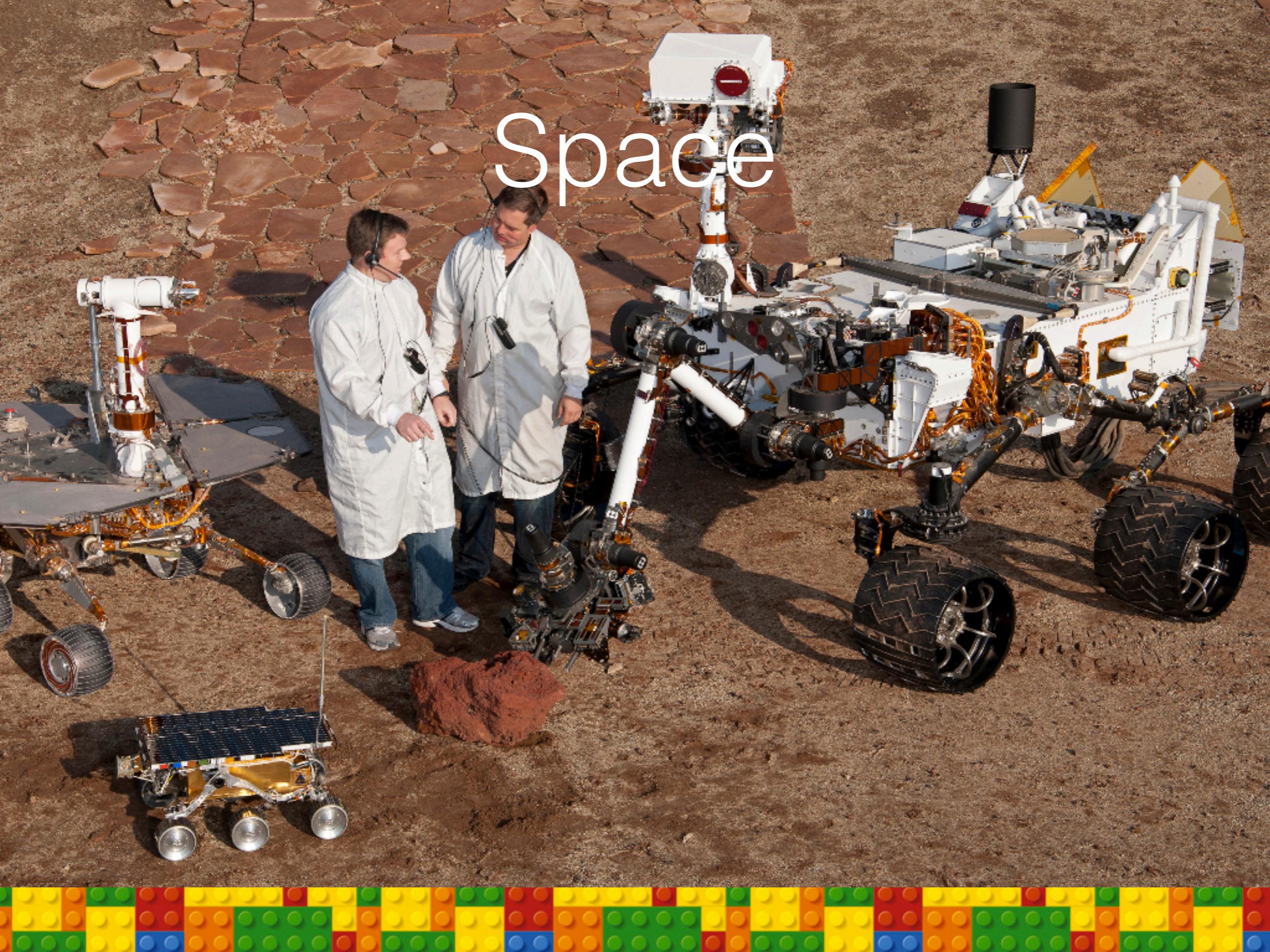


# Logistics



# Manufacturing





# Space



# Education





Fun and flying cows

I ❤  
NEUTRINOS