



# Robot Autonomy

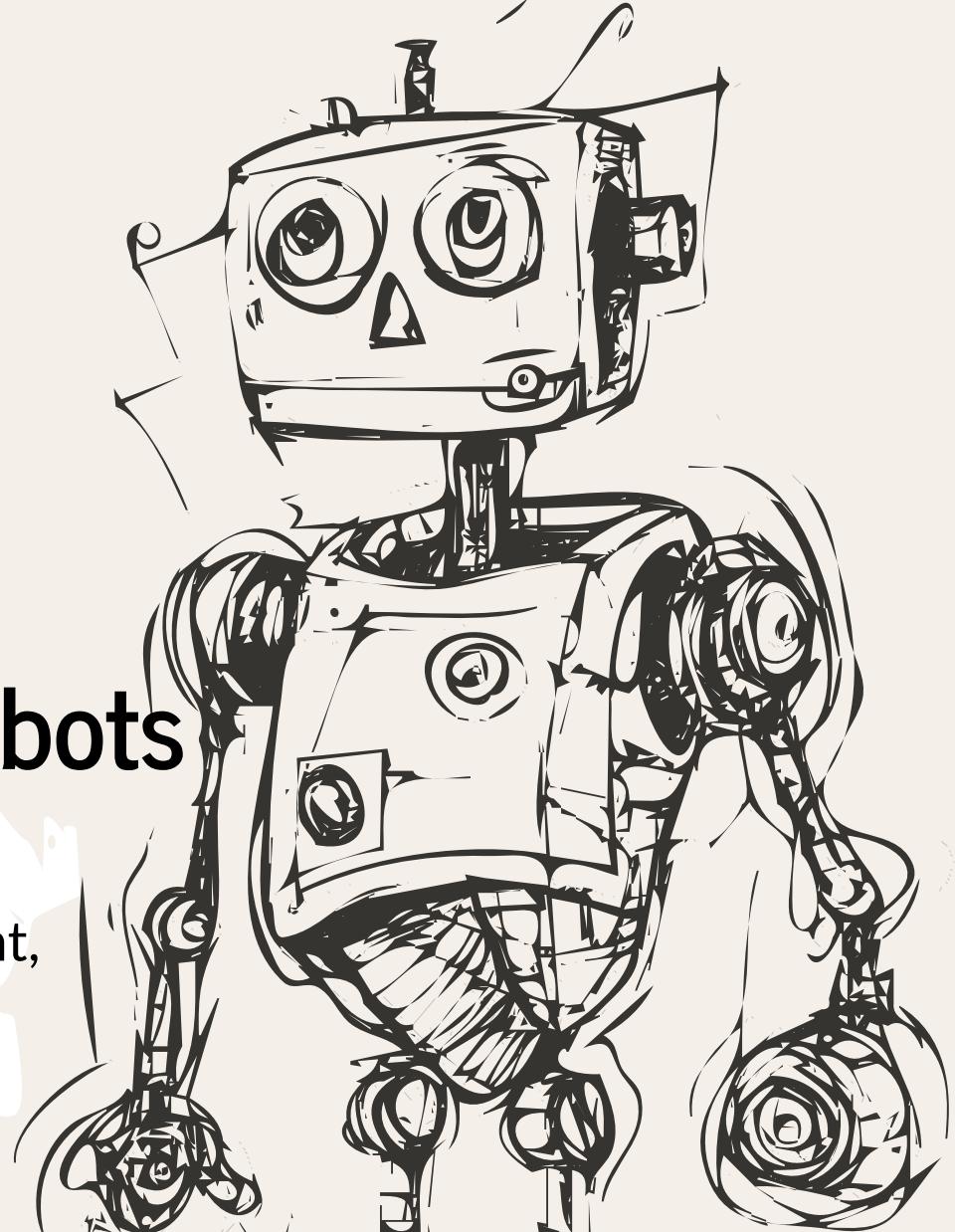
## Autonomous and intelligent robots

Student: Sergio Jacobo

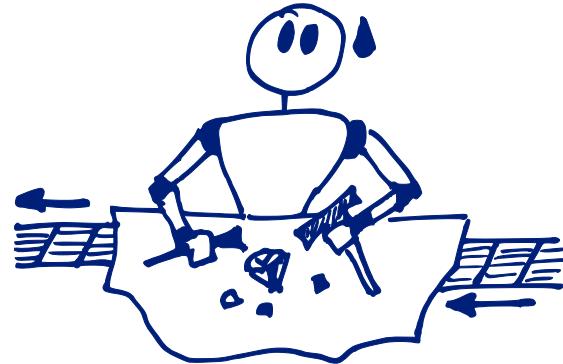
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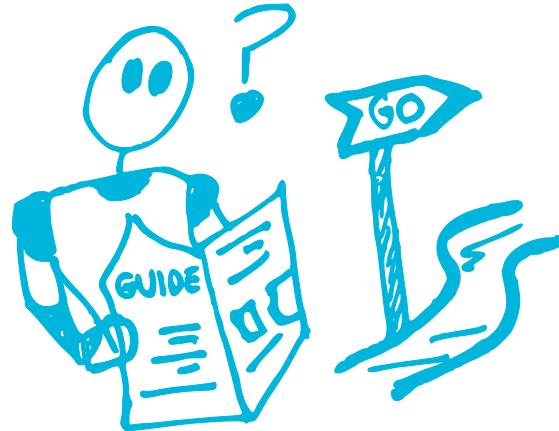
Oct. 8 2024



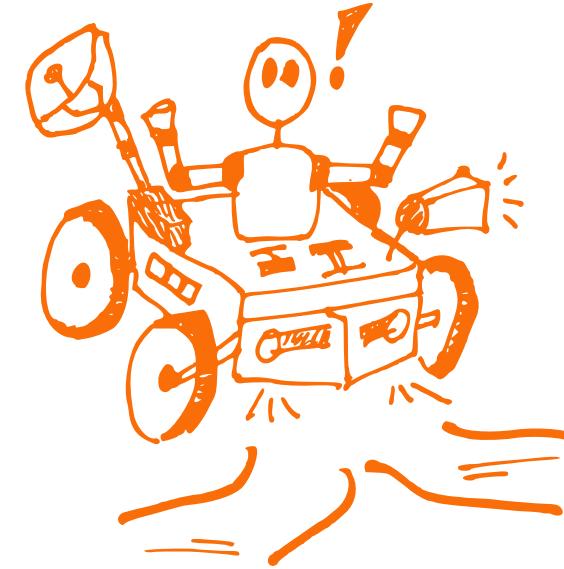
# Key ideas



One, two, three ...  
again



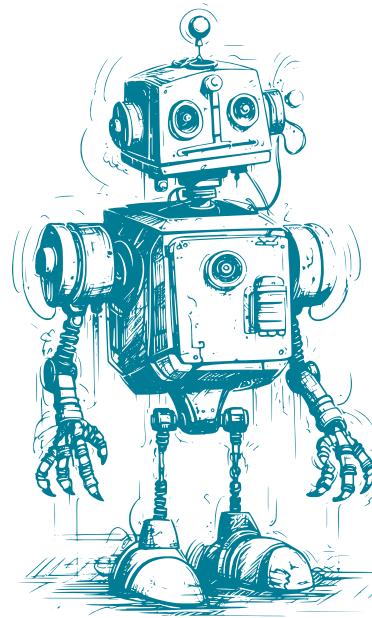
Where should I go?



Is there any life  
waiting to be  
discovered?

# What does autonomy mean in robotics?

# A draft meaning



Cleaning floors by covering the entire house

The capacity to perform specific tasks without  
**“human interaction”** within a known working  
environment.

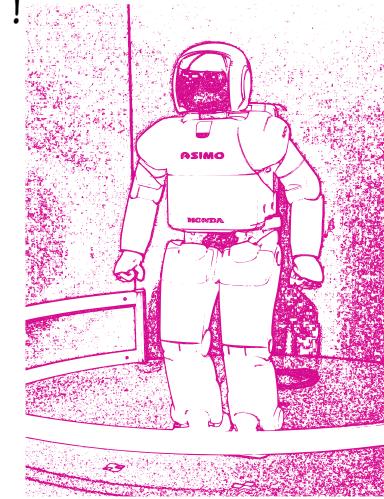
A draw of a robot generated with AI in Freepik

# Should a robot be autonomous

Yes, of course !!!

## Why?

- Minimize working load and maximize productivity
- ☒ Perform continuos work even without constant human communication/supervision



ASIMO (2000) at the Expo 2005 from Wikipedia

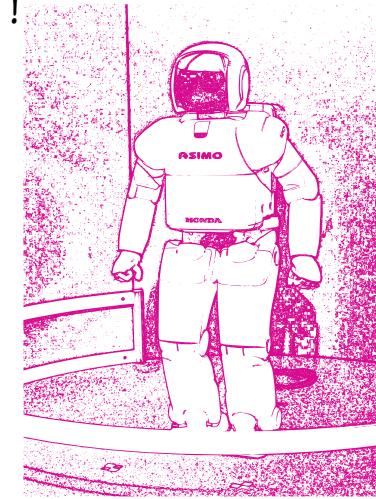
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Why?

How?

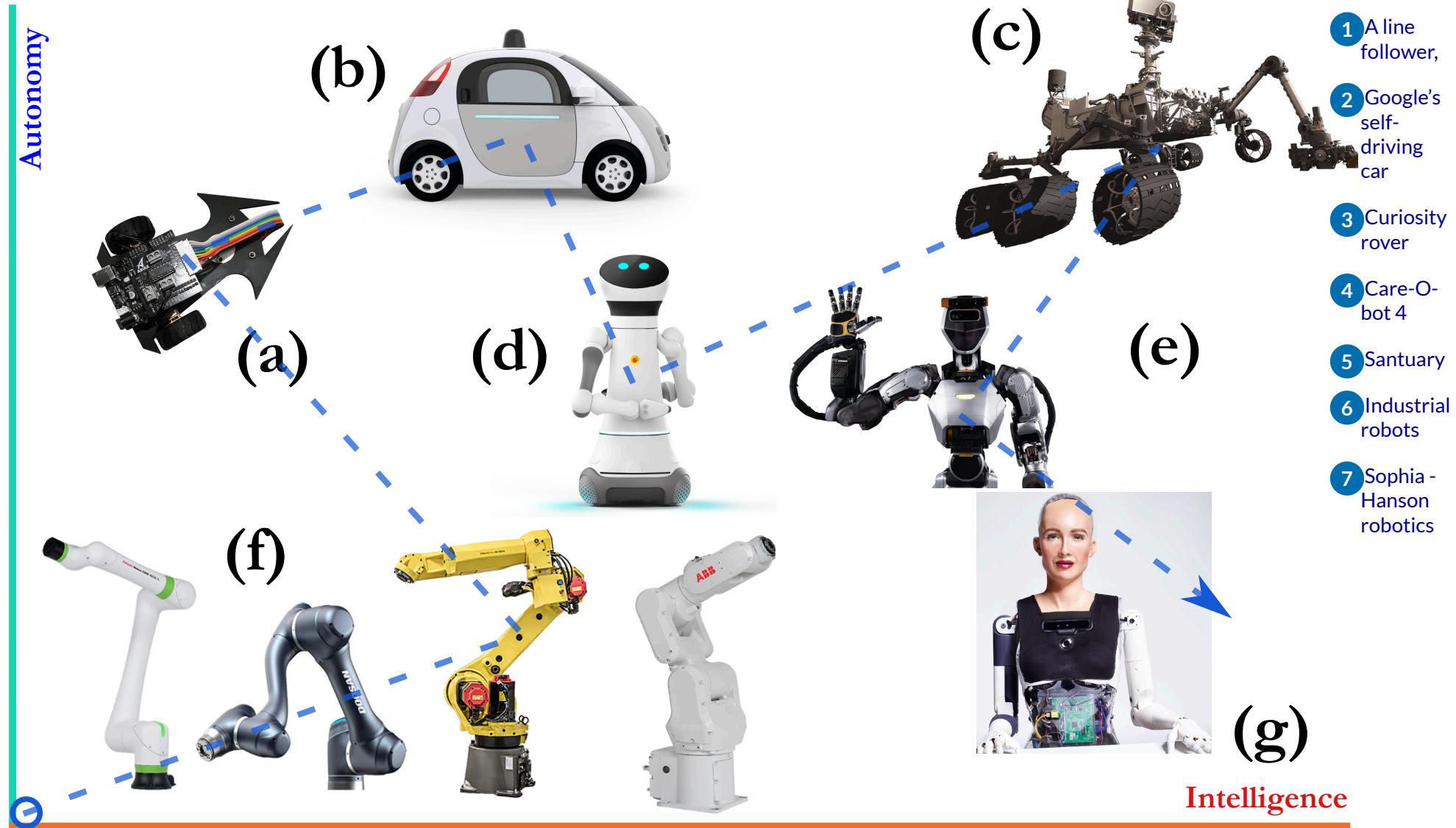
- ⚙️ Ability to take own decisions based on sensor data
- 🤖 Interact with the environment based on any kind of manipulation/communication



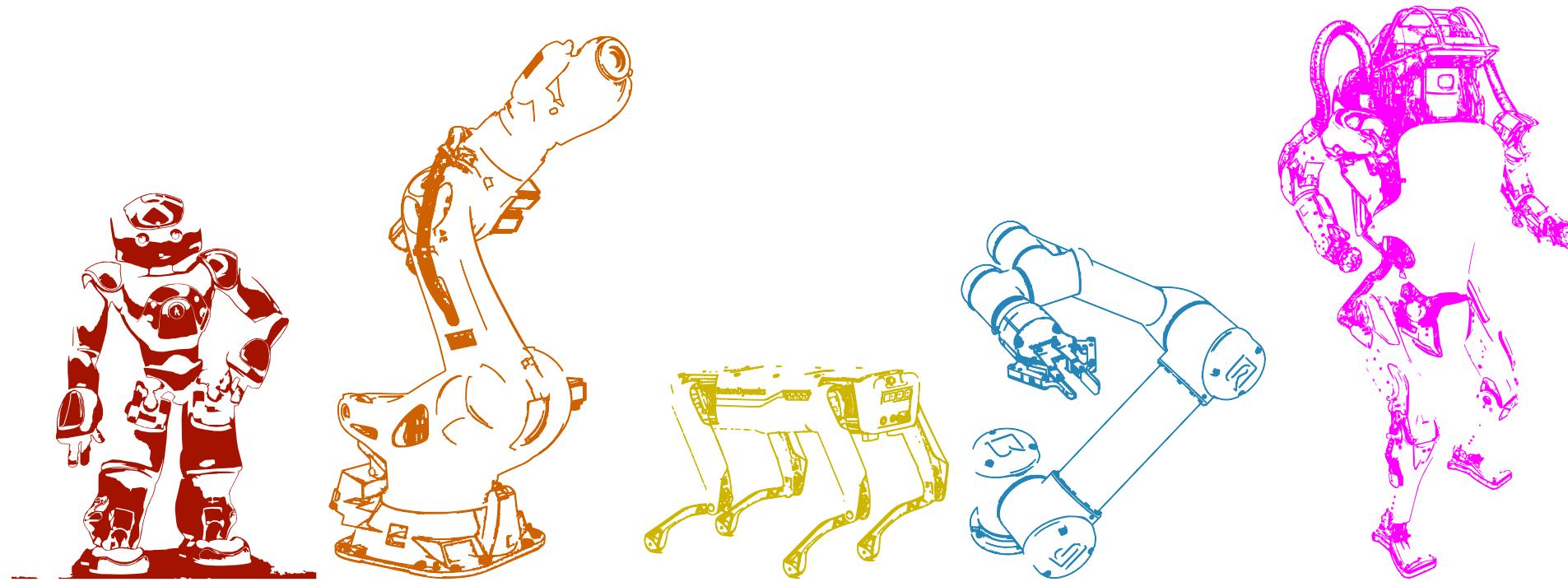
ASIMO (2000) at the Expo 2005 from Wikipedia

# What robots are there today?

# State of Art



# Commercial robots today



Nao robot, Kuka robot arm, Spot mini dog, UR5 Cobot y Atlas robot

# Effects of high-level autonomy on society

- Social
  - Changes in human interaction. In customer services.
- Politics
  - Regulation and governance. Preventing tech. from being misused.
- Education
  - Change in required professional skills.
- Industry
  - Increase in efficiency and productivity.
- Ethics
  - Moral responsibility. Decisions without human intervention?

- 🔗 Slides based on [emitanaka.org/slides/Ihaka2022/](https://emitanaka.org/slides/Ihaka2022/)
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