Robotics











https://kahoot.it/challenge/?quiz-id=4b232671-1e77-479fbfda-219ba080b807&single-player=true









How many Industrial robot families exist?

- Cartesian
- Parallel
- Cobot
- AGV
- Articulated
- SCARA







Parallel Manipulator:

Mechanical system that uses several computer-controlled serial chains to support a single platform, or endeffector.







Automated guided vehicle or aut omatic guided vehicle (AGV)

A portable robot that follows along marked long lines or wires on the floor, or uses radio waves, vision cameras, magnets, or lasers for navigation







Cobot, or collaborative robot

A robot intended for direct human robot interaction within a shared space, or where humans and robots are in close proximity







Cartesian coordinate robot (linear robot)

An industrial robot whose three principal axes of control are linear (they move in a straight line rather than rotate) and are at right angles to each other







The SCARA

It's a type of industrial robot. The acronym stands for Selective Compliance Assembly Robot Arm or Selective Compliance Articulated Robot ASCARA's parallel-axis joint layout, the arm is slightly compliant in the X-Y direction but rigid in the 'Z' direction, hence the term: Selective Compliant. This is advantageous for many types of assembly operations







Articulated robot

It's a robot with rotary joints. Articulated robots can range from simple twojointed structures to systems with 10 or more interacting joints. They are powered by a variety of means, including electric motors.







• Suspended robot:

Advantages: Speed, fiability

Downsides: charge of 500g, security barrier , price

• Platform robots:

Advanteges: Accuracy, reliability , Downsides: charge ,speed, reliability, 3D amplitude

• SCARA robots:

Advantages: Accuracy, price

Downsides: charge , 3D amplitude, price







• Cobot:

Advantages: Easily adapatable, no safety space, cheaper

Downsides: charge, speed

• AGV:

Advantages: Charge,

Downsides: price

Catesian robots:

Advantages: Mechanical resistance Downsides: space saving

