03 Feb '25

→ AI in classroom

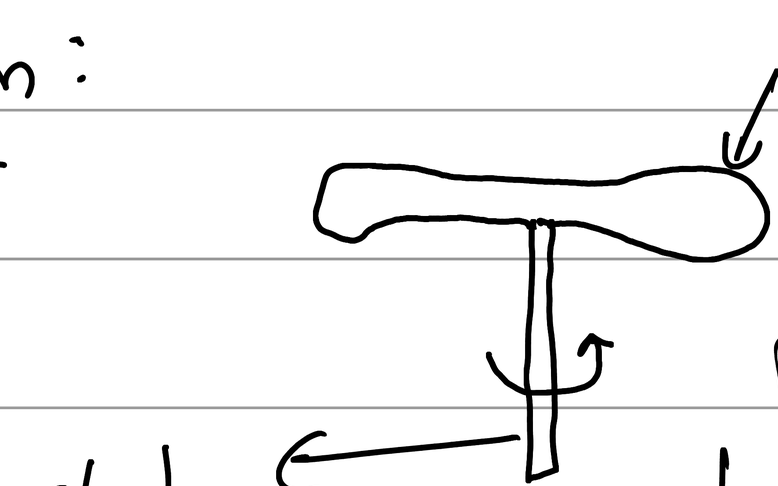
- when/where to use AI
- advantages
- disadvantages / problems

HW: Complete the previous HW with advantages/problems in each case.

→ Drones:

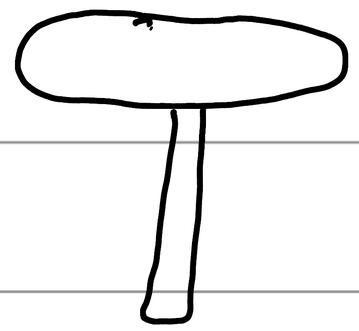
We will use an open source programmable Drone called Crazyflie.

Toy fan:



Rotate the stick with your hands and leave at once, then the toy fan flies for a short time.

Normally, the toy fan doesn't fly.
Why? Because earth attracts
all objects to itself.
When the toy fan is spinning, it starts
to fly. Why?
The air might be pushing it up.
When the toy fan's spin starts to slow
down, it starts coming down to
the earth.
→ It means, it needs rotate
faster than some value to keep
flying.



↑ Air is pushing it up. And this force increases with increasing speed of rotation.

↓ gravity is pulling it down (It doesn't change)

Initially, when we spin it hard, the upwards push by air is > gravity, so the toy goes up. Then as the spin slows down, air push = gravity, then air push < gravity. So the toy starts to come down.

HW: Make a working paper propeller toy.

HW: Study the classnotes & AI generated notes on drones.

HW: Play with a toy fan, and see how the spinning speed affects vertical (up & down) motion.

x