CONTROL ENGINEERING WITH PYTHON

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W DEFINITIONS

Control engineering or **control systems engineering** is an engineering discipline that applies automatic control theory to design systems with desired behaviors in control environments.

The discipline of controls overlaps and is usually taught along with electrical engineering at many institutions around the world.

Control theory in control systems engineering is a subfield of mathematics that deals with the control of continuously operating dynamical systems in engineered processes and machines.

A **dynamical system** is a system in which a function describes the time dependence of a point in a geometrical space.

Examples include the mathematical models that describe the swinging of a clock pendulum, the flow of water in a pipe, and the number of fish each springtime in a lake.

⚙ ROBOTIC ARMS

DEMO: $2k\pi$ (CAS)

✈ AIRCRAFTS

- Boeing 747 Max Plane Crashes
- The Dangerous Flaw in Boeing’s Automated System
- Accident Preliminary Report: 
- What is the Boeing 737 Max MACS?
- Eurofighter Typhoon

🚗 SMART VEHICLES

- Waymo (“Google Car”),
- Tesla: Autopilot, Semi (truck),
- Uber: ATG
- …

Control Theory is about:

- Modelling,
- Analysis and
- Control

of dynamical systems

RESSOURCES

https://github.com/boisgera/control-engineering-with-python