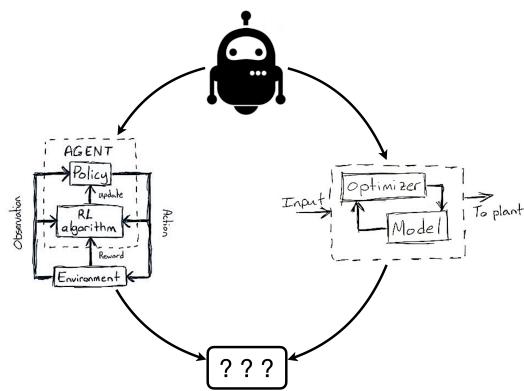
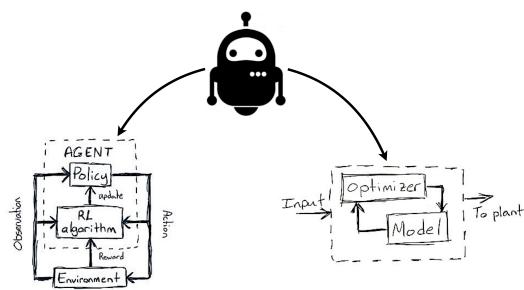
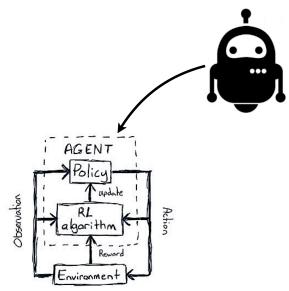


# **A reinforcement learning perspective on industrial model predictive control**

**Upper Bound 2024**

Nathan Lawrence

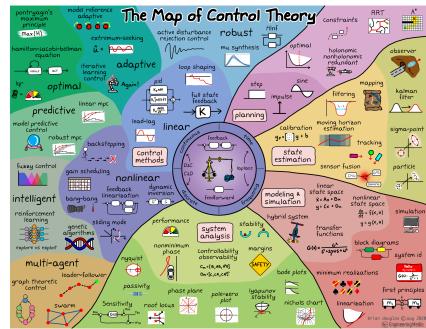
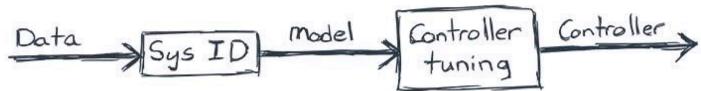


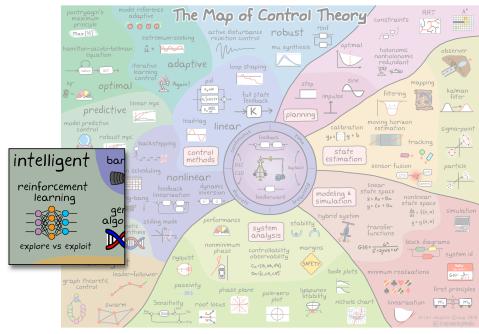


Sketches—Brian Douglas

Day-to-day life depends on safely regulating a system around a constant value:

1. Cruise control
  2. Temperature
  3. Concentrations
  4. Levels
  5. Moisture
  6. Etc...





# Today

Combine reinforcement learning (RL) & model predictive control (MPC)!

- RL, MPC, and some stuff in-between pertaining to process control
  - How to implement these ideas
  - Emphasis on intuition rather than rigor
  - Ask questions and be ready to discuss things with your neighbor