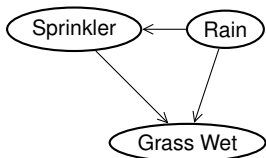
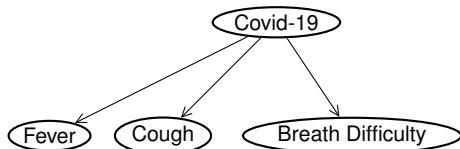




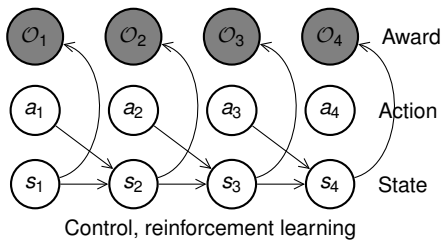
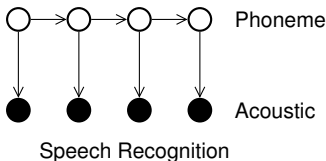
DIRECTED GRAPH REPRESENTATION



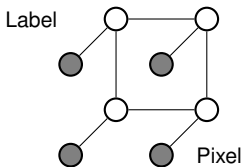
Is the sprinkler working?



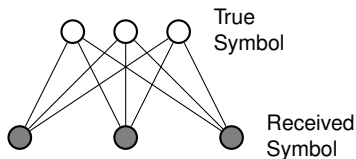
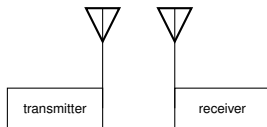
Is the person get contagious by COVID?



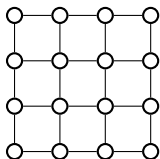
UNDIRECTED GRAPH REPRESENTATIONS



Vision Perception



Digital communication



Physics (Ising or Potts model)

- Error-control codes
- Computational biology
- Natural language processing
- etc.