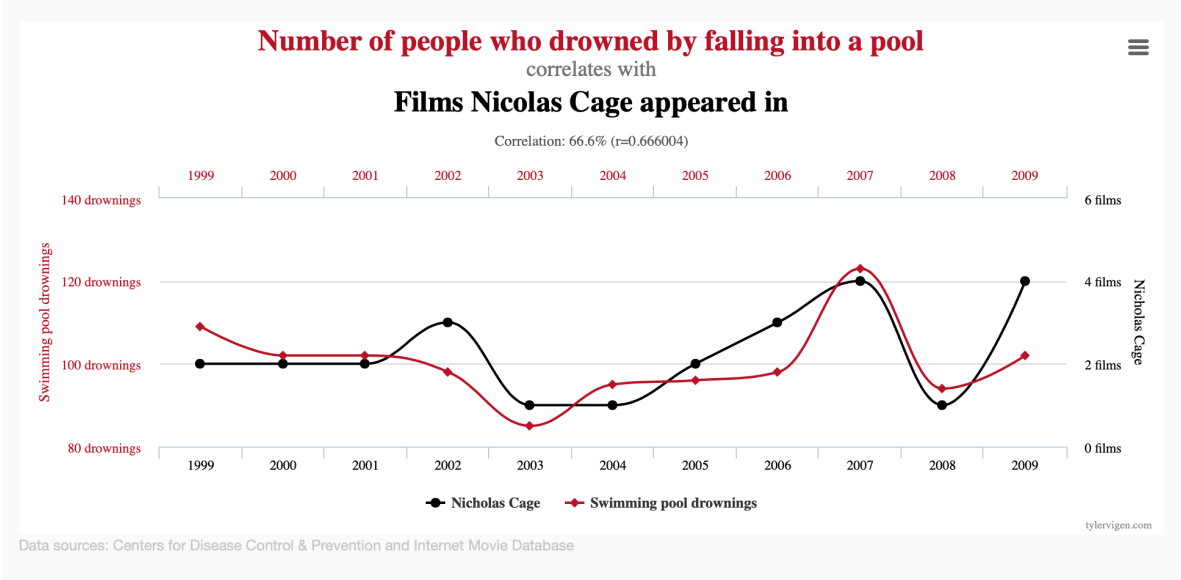
L1 Introduction

Or what's about to happen

Causal inference

Correlation vs causality



(https://www.tylervigen.com/spurious-correlations)

Topics in the course going forward

- Structural causal models (SCM)
- Reasoning about intervention
- Reasoning about counterfactuals
- Not in the book:
  - Causal discovery
  - Latent confounders
  - Other applications in machine learning

Reinforcement learning

Unknown environment and agent needs to figure things out on it's own

Markov Decision Process

Is used a lot for implementing the method

Supervised vs reinforcement learning:

- Predict labels on given data (SVL) / Given a state, what action should I take? (RFL)
- SVL: Based on data features, we can predict error and improve / RFL: We don't know which action in the sequence was bad/good so it's difficult to say which action is best

- RFL: Based on actions, the agent sees data and not all of the data. We can not take face value of the data as it was chosen by the agent itself based on the action and might change on the situation