The Data Delusion

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What is Machine Learning?

- ▶ A set of techniques for extracting information from data.
- ▶ Principal technology underlying recent advances in *artificial intelligence*.
- ▶ A major technology underlying *data science*.

Example: Image Classification

Perceptron

Example: AlphaGo

- An achievement in Artificial Intelligence

Example: Driverless Cars

- Engineered system with many components.
- Many vital components are based on machine learning.
- Pedestrian recognition (an image classification problem)

Example: Facebook

- Most aspects of the interface controlled using machine learning.
- Ranking of posts in newsfeed.
- Ranking of adverts.

Machine Learning

data + model = algorithm

- Your actions (likes, friends, clicks) are turned into a vector.

$$\mathbf{x} = \begin{bmatrix} 1.0 & 2.3 & 3 \end{bmatrix}$$

You Will Need

- ► Training data
- ► A model of how they interact
- ► Some computer time

The Professions

- What aspects cannot/can be replaced by a machine?
  - What makes professions special.
  - Encroachment of automation on 'middle class' roles.
- Not just your role, but the wider societal role.
- How will the professions evolve?

Thanks!

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