Notes on Pattern Recognition

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Pattern Recognition is a subset of Machine Learning and Aritficial Intelligence in general. It's concerned with analyzing data, extracting particular features or patterns from that data. We will discuss severl methods for feature extraction, all the way to neural networks and just touch on deep learning!

Introduction

Here, I am using the `tufte-latex` package for LaTeX. I thought the design looked quite nice and wanted to give it a shot!

Curve Fitting

There exist two main types of problems in the field of pattern recognition. First, there is ***regression***, and there is ***categorization***. [1]

The terms *Artificial Intelligence, Machine Learning*, and *Pattern Recognition* all share common properties. PR $\wedge$ ML $\subset$ AI. ML atempts to make computers take in empirical data and make decisions. AI, more broadly, tries to make computers perform actions that were usually thought to be exclusive to humans.

[1] **regression** problems deal with the mapping of an input vector to a continuous space, whereas **categorization** takes an input and places it in a finite and discrete set of different categories.