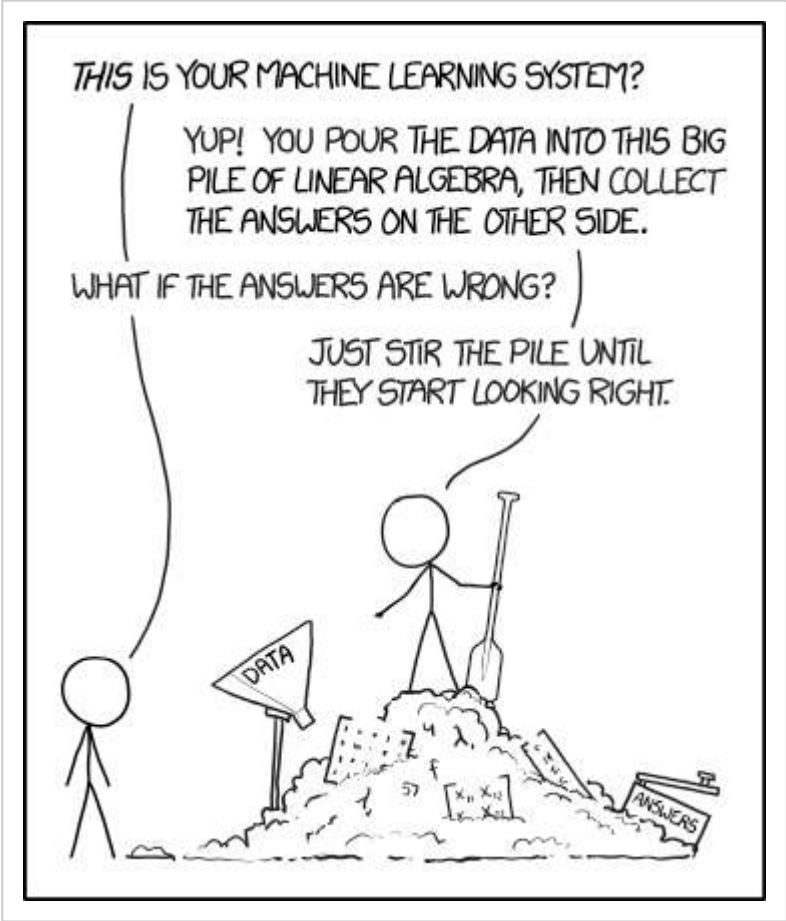
Introduction

Machine learning (ML) is a term that is often thrown around as if it is some kind of magic that once applied to your data, will create wonders! If we look at all the articles about machine learning on planet Internet, we will stumble upon articles of two types: heavy academic descriptions filled with complicated jargon or fluff talk about machine learning being a magic pill.



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In these series of lessons, we are going to have a simple introduction to the subject so that we can grasp the fundamentals well. We will dive into the practical aspects of machine learning using Python's Scikit-Learn package via an end-to-end project.

> Please note that this is not meant to be a comprehensive introduction to the field of machine learning; that is a large subject and necessitates a full course of its own!

The goals of this series of lessons are:

- To introduce the fundamental concepts of machine learning.
- To learn about several of the most important machine learning algorithms and develop an intuition into how they work and when and where they are applicable.
- To get an understanding of what are the necessary steps and how they can be applied to a machine learning project via a real end-to-end example.

But before we continue, you might be asking yourself, **"What's really the difference between Data Science and Machine Learning?!"**

The two fields do have a big overlap, and they often sound interchangeable. However, if we were to consider an oversimplified definition of the two, we could say that:

- **Data science** is used to gain **insights and understanding** of the data.
- **Machine learning** is used to produce **predictions**.

That said, the boundary between the two is not a distinct one; most practitioners need to be capable of switching back and forth between the two which is why we are going to dive into machine learning in a data science course.