Resource:

* Machine learning mastery
* https://machinelearningmastery.com/start-here/
* Week#1:
* The “Foundations” section which has the following topics
  + How Do I Get Started?
  + Step-by-Step Process
  + Probability
  + Statistical Methods
  + Linear Algebra
  + Optimization
  + Calculus
* 7/4
  + Topic: How Do I Get Started?
    - Step 1: Adjust Mindset. Believe you can practice and apply machine learning.
      * What is Holding you Back From Your Machine Learning Goals?
        + Identify and Tackle Your Self-Limiting Beliefs and Finally Make Progress

Q is:

“Are you waiting to acquire some perfect set of skills before getting started? Are you waiting for the perfect conditions before getting started?

**JUST START NOW,** do not wait until you have that degree, be genius in something, ect. Believe that you can do and just start, you will always find a way to say that today is not the perfect day to start learning. “You can make good progress with a few hours a week, or tens of minutes per day”

Have you taken a first step and abandoned the trail?”

If you struggled with a concept in ML, change the direction. Focus on building small projects so you do not feel hopeless.

* + - * Why Machine Learning Does Not Have to Be So Hard
        + Instead of following the bottom-top approach that we did at school where we start learning any subject by covering theories, etc. It is better to do the top-bottom (“You learned to read by practicing reading, not by studying language theory”) which focus on go directly and build the project. This way you see results faster, yes you won’t master the thing you are learning, but this can be solved by learning those theory later, when you really need to.
        + What need to do” You can learn machine learning by practicing predictive modeling, not by studying math and theory.”:

“Start by learning how to work through very simple predictive modeling problems using a fixed framework with free and easy-to-use open-source tools.

Practice on many small projects and slowly increase their complexity.

Show your work by building a public portfolio.”

* + - * How to Think About Machine Learning?
        + “What machine learning is and how it relates to artificial intelligence.

(an example to understand the idea): Developing code to investigate how ants “learn” the optimal path from their home to their food source.

Machine learning is a subfield of artificial intelligence.

Artificial intelligence concerned with developing programs that are intelligent, or can do intelligent things.

Intelligence involves learning, e.g. machine learning, but may involve other concerns such as reasoning, planning, memory, and much more.

Machine learning problems are also artificial intelligence problems.

* + - * + How it is related to statistics:

statistics is sub-field of mathematics that is concerned with describing and understanding the relationships in data. Ex. Developing models to best characterize the relationship between two variables.

Many methods used for understanding data in statistics can be used in machine learning to learn patterns in data. These tasks could be called machine learning or applied statistics.

* + - * + The corner of machine learning that you should focus on.

No need to know everything but focus on what is needed In terms of the

problem you are trying to solve.

solution you require.

* + - * + How to think about your problem and the machine learning solution to your problem.”
      * Find Your Machine Learning Tribe

Table

Description automatically generated with medium confidence

* + For ML engineering communities, check this <https://machinelearningmastery.com/machine-learning-communities/>
  + Check <https://machinelearningmastery.com/machine-learning-tribe/> for recommended books for 6-10 (read those and choose your tribe)
* Applied Machine Learning Process:
  + 5-Step Systematic Process

1. Define the Problem
2. Prepare Data
3. Spot Check Algorithms
4. Improve Results
5. Present Results

* Week#4
* Title:
  + Deep Learning CNN for Fashion-MNIST Clothing Classification by Jason Brownlee on May 10, 2019 in Deep Learning for Computer Vision
* Field:
  + ML
* Link:
  + <https://machinelearningmastery.com/how-to-develop-a-cnn-from-scratch-for-fashion-mnist-clothing-classification/>
* Goal:
  + Get a high-level understanding of ML-image classification
* Note: