MACHINE LEARNING

https://youtu.be/6fRRAX3E-a4

https://www.youtube.com/watch?v=espQDESe07w&t=0s

1-HOW TO LEARN

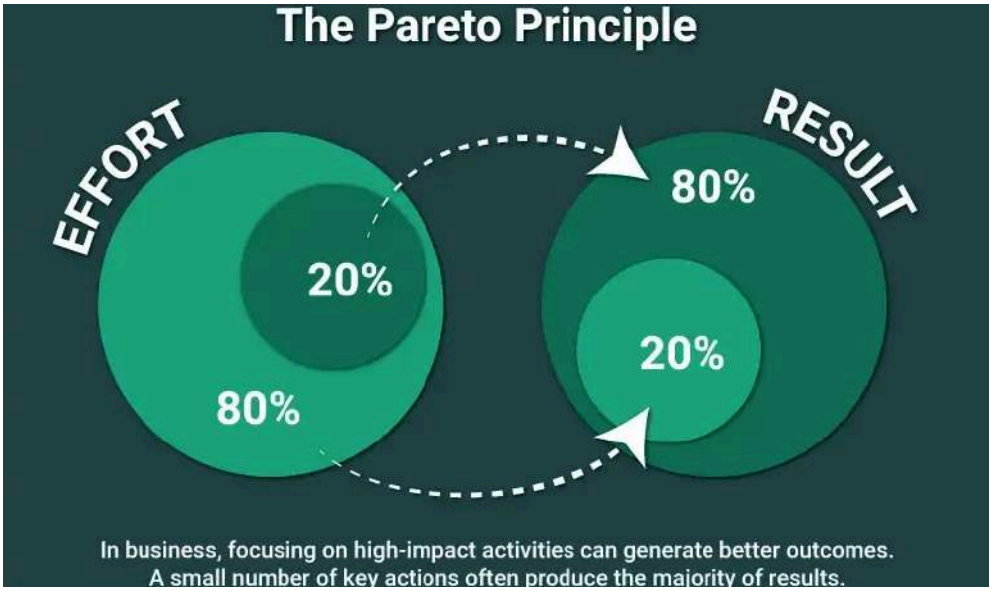
1.1 technology changes fast

1.2 problem solving is everything

1.3 confidence is important (don’t fear to problems)

1.4 don’t waste time learning useless things

1.5 use pareto principle



2-WHERE TO START

2.1 python:

get familiar with jupyter notebook

programing fundamentals:

1.basic syntax

2.variables,math,if/else, loops, printing

3.datatypes

4.functions and classes/objects

5.modules, packages and importing

pandas tutorial:

very imp part of machine learning, just like 20% effort and 80% result. so, do pandas very nicely.

3-PROJECTS (basic)

3.1 steps for making basic data analysis project:

1.find dataset for analysis .

2.import data, cleanup the data, make units uniform, decide what to do about missing data and outliers .

3.plot different variables and analysis correlations between them .

4.turm rest into slideshow (inbuilt in jupyter notebook).

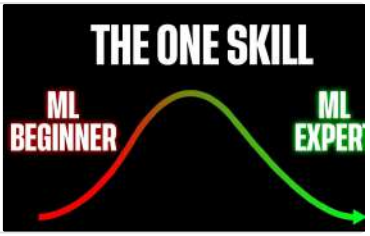
4-ESSENTIAL MATH FOR ML

How Math makes Machine Learning easy (and how you can learn it)

The Math Skills that make Machine Learning easy (and how you can learn it)

Also Watch:

https://www.youtube.com/watch?v=wOTFGRSUQ6Q&t=0s



4.1 basic statistics and probability [2-3 weeks max]:

https://www.khanacademy.org/math/statistics-probability

4.2 linear algebra fundamentals:

https://www.khanacademy.org/math/linear-algebra

4.3 calculus [esp. derivatives]:

https://www.khanacademy.org/math/differential-calculus

5-CORE ML CENCEPTS AND ALGORITHM

All Machine Learning algorithms explained in 17 min

All Machine Learning algorithms intuitively explained in 17 min

In this video I will go through all machine learning algorithms in less

https://www.youtube.com/watch?v=E0Hmnixke2g&t=0s

MASTER SIMPLE ALGOS BEFORE DEEP LEANING:

[SIMPLE ALGORITHMS: LINEAR REGRESSION, LOGISTIC REGRESSION, RANDOM FOREST, DECISION TREE, GRADIENT BOOSTING]

https://www.youtube.com/playlist?list=PLoROMvodv4rPP6braWoRt5UCXYZ71GZIQ

6-SCIKIT-LEARN TUTORIAL

genius tips: [do following for each algorithm you learn]

1. implement it form scratch (basic python)
2. implement it using scikit-learn using a toy dataset.
3. use both your own implementation and the sklearn toolkit in real dataset .

how to not stuck in tutorial hell:

1. 2-3 tutorials max per area.
2. move on to a real project to learn anything .

7-FRIST ML PROJECT

1. start with a tutorial
2. add/change some features, change some features.
3. swap out the data set .
4. try break code and then fix it .

some advance topics:[learn only when it's needed]

1. dl architecture
2. CNNs for computer vision
3. RNNs for sequential data
4. transformation for NLP
5. advanced optimization techniques

6. model deployment strategies
7. latest research papers