ML ROADMAP – ULTIMATE GUIDE & REFERENCES

Things I have mentioned in this PDF will help you kickstart your successful career in AI/ML. I have added the resource links of all important things in this PDF.

DEGREE:

With basic understanding of Maths, you can get started. A CS degree surely helps but even if you don't have one, your skills will help you get a successful career in AI/ML

REQUIREMENTS:

- Programming
  - If confused choose Python as your first programming language. Follow these courses:
    - Python in Hindi – 100 Days of Code by CodeWithHarry
    - For English Lovers, there is this awesome course on Udemy
- Now once you have a basic understanding of Python, start learning Machine Learning
  - Learn Basics – Start from this book
  - Learn to use this amazing package for building quick Data Reports
  - Learn NumPy from here
  - Learn Pandas from here
  - Learn Tensorflow from here
  - Learn Keras from here
  - Matplotlib / Seaborn from here
  - PyTorch from here
- Statistics + Maths
  - Linear Algebra Notes (Amazing Resource for revising Data Science by Queen Mary University of London)
  - Learn the basics of Mean, median, mode, dy/dx. This quick video can help you get started.
  - Buy a copy of Hines Book (Probability and Statistics in Engineering by William Hines)
  - Focus a bit more on Normal Distribution
  - Learn basics of Optimization and Gradient Descent. You can watch this series I created long back.
  - Get this amazing book on Graphs (Play with Graphs Book – Amit Aggarwal)
- Learn Core ML Algorithms

  While you are learning these algorithms, try to implement these using sklearn package. sklearn has all these algorithms pre implemented as classes which can be imported from their package. For basic understanding on how to use sklearn see this. These are the topics you should start with:

  - Gradient Descent & Linear Regression
  - Supervised vs Unsupervised learning
  - Clustering
  - Reinforcement Learning
  - Grab a copy of this book: Hands on ML with Scikit-learn and Tensorflow (Author of this book also maintains constantly updating GitHub Repo)
  - Watch this project video I created on an End-to-End ML Project
- Additional resources
  - Learn Basic Commands of Linux from this video by CodeWithHarry
  - Learn to push your code to GitHub - Watch this quick video.
  - Learn how to SSH into a Linux machine & about SSH Keys from here
  - Optionally learn about Excel VBA
  - Good Code Repos & Papers: PapersWithCode