# Chapter 1 – Introduction

Main questions:

1. What is machine learning. When to use ML algorithms and when it is not useful.
2. DS vs ML vs AI vs DL.
3. Real world applications (with examples).
4. Video tutorials & articles & books & exercises.

Main books:

**Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow** - <https://drive.google.com/file/d/1Qsnd4WeApKOPDBllwqxiqGjPopFZONdj/view?usp=sharing>

**Grokking. Artificial Intelligence Algorithms** - <https://drive.google.com/file/d/1uhf4tvqf_rSgAEpfagcQ4OjZ_ruClUBf/view?usp=sharing>

**NumPy Cookbook (Python) (Ivan Idris)** - <https://drive.google.com/file/d/1y2TPUtvTKzRCmKj5_TBab75IuRkuh-S-/view?usp=sharing>

**NumPy, 3rd Edition Build efficient, high-speed programs using the high-performance NumPy mathematical library (Ivan Idris)** - <https://drive.google.com/file/d/1yKpEYnF38VbTxFHDyfv4Y0BeNktEcCvA/view?usp=sharing>

**Pandas\_1\_x\_Cookbook\_Practical\_recipes\_for\_scientific\_computing** - <https://drive.google.com/file/d/1Cl8La-tv2zXY6H_qk1rtRL0Pv038MdJg/view?usp=sharing>

**The Pandas Workshop\_O'Reilly** - <https://drive.google.com/file/d/1o_VcUUGv9cTDJQiOI_EdyHgv5mQmmeZ6/view?usp=sharing>

**Practical Machine Learning for Computer Vision End-to-End Machine Learning for Images (Valliappa Lakshmanan, Martin Görner etc.)** - <https://drive.google.com/file/d/1NBG_udavopNXVDh68y9YCM6FD20CGE1V/view?usp=sharing>

**Applied Econometric Time Series** - <https://drive.google.com/file/d/1s2XBXVOBj7W-lcwh5ao9Q0a-2NyuEXgi/view?usp=sharing>

**Probability For the Enthusiastic Beginner** - <https://drive.google.com/file/d/1fvhwpzaksPuQ6wk_x0S3trYQykVTP8Aq/view?usp=sharing>

**Statistics (13th Edition James T McClave Terry T Sincich** - <https://drive.google.com/file/d/1EbdqxgI5T5ri1CRoK3LfC-IyRpSALlvU/view?usp=sharing>

**Calculus\_Early\_Transcendentals\_Ninth\_Edition\_James\_Stewart,\_Daniel** - <https://drive.google.com/file/d/1loX9qBGd6YOggNIrU5HtFoaXq3XD2Xop/view?usp=sharing>

**Linear Algebra and Its Applications, 4th edition** - <https://drive.google.com/file/d/12nUA2s2CBPz_ddWFmgM_tWUaQz4b_Tse/view?usp=sharing>

**Linear Algebra and Optimization for Machine Learning** - <https://drive.google.com/file/d/1yLPe78WjVkzzdT_ldpSa4PyIaqh_kV2N/view?usp=sharing>

**Mathematics for machine learning** - <https://drive.google.com/file/d/1D0qek1xVllSWCU2MEbjuZ6cOZqii4rI_/view?usp=sharing>

Resources:

1. **Chapter 1. The Machine Learning Landscape** [](https://drive.google.com/file/d/1Qsnd4WeApKOPDBllwqxiqGjPopFZONdj/view?usp=sharing)

<https://drive.google.com/file/d/1Qsnd4WeApKOPDBllwqxiqGjPopFZONdj/view?usp=sharing>

1. **Chapter 1. Intuition of artificial intelligence**

<https://drive.google.com/file/d/1uhf4tvqf_rSgAEpfagcQ4OjZ_ruClUBf/view?usp=sharing>

1. <https://developers.google.com/machine-learning/intro-to-ml>
2. 