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**FIRST WEEK REPORT**

On our first week learning Machine Learning we covered the following:

**Why do we get to study Machine learning?**

In normal coding we use hardcoded conditions “if” and “else” to make decisions, but this method is good if we have don’t have many conditions to implement. So, machine learning comes and use the previous example of the problem, automatically making the decisions it self thanks to its algorithms.

**Why do we use python in Machine Learning?**

Python is a powerful general-purpose programming language combining languages like MATLAB or R. Has libraries helping in data loading, statistics, natural language processing, visualization and many more. Advantages of using pythons in Machine Learning: -

* The ability to interact directly with code, using terminal and Jupyter Notebok
* Python allows creation of complex graphical user interfaces (GUIs) and web services integrated into existing systems

**Scikit-learn**

scikit-learn is an open source project, meaning that it is free to use and distribute, and anyone can easily obtain the source code to see what is going on behind the scene. The following are some of the libraries in scikit-learn:

* **Numpy**

Is specific for computing, it contains multidimensional arrays, linear algebra and Fourier transform, and pseudorandom number generators

* **SciPy**

Is specific for computing and deals with advanced linear algebra routines, and statistical distribution, signal processing and more

* **Matplotlib**

is the primary specific plotting library in Python. It provides functions for making visualizations like charts, histograms, scatter plots.