Lab 1 Guide

This lab covers a very brief hands-on introduction to Python

# 1\_Python101

Contains:

* Most basic data structures and usages
* Control flow statements & conditional operators
* Reading and writing to files
* Introduction of very basic packages
* Function definition
* Class definition

# 2\_Numpy\_101

A brief introduction to the package **numpy** (numerical python). Contains:

* Create one dimensional and multidimensional arrays
* Basic operations between nd-arrays
* Creation of random nd-arrays
* Calculations using nd-arrays
* Reshaping of nd-arrays

# 3\_nltk\_101

Basic text manipulations and brief usage of the **NLTK** package. Contains:

* String methods
* Splitting into tokens and characters
* Counting tokens
* Sentence tokenization
* Word tokenization
* Stopwords removal
* N-grams tokens extraction
* Tokenizers in general
* POS tagging (part-of-speech tagging)
* Stemming
* Lemmatization
* Named Entity Recognition (NER) tagging

# 4\_beautifulsoup\_and\_pandas\_example

An introduction to scrapping using beautiful soup and pandas packages. Example of simple scrapping of titles from a website and perform data transformations and filtering.