Scikit-learn

Link : <https://www.dataquest.io/blog/sci-kit-learn-tutorial/#:~:text=Scikit%2Dlearn%20is%20a%20free,libraries%20like%20NumPy%20and%20SciPy%20>.

Scikit-learn is a free machine learning library for Python. It features various algorithms like support vector machine, random forests, and k-neighbours, and it also supports Python numerical and scientific libraries like NumPy and SciPy.

In this tutorial we will learn to code python and apply Machine Learning with the help of the scikit-learn library, which was created to make doing machine learning in Python easier and more robust.

SVM: support vector machine

Link: <https://scikit-learn.org/stable/modules/svm.html#svm-classification>

**Support vector machines (SVMs)** are a set of supervised learning methods used for [classification](https://scikit-learn.org/stable/modules/svm.html#svm-classification), [regression](https://scikit-learn.org/stable/modules/svm.html#svm-regression) and [outliers detection](https://scikit-learn.org/stable/modules/svm.html#svm-outlier-detection).

The advantages of support vector machines are:

Pickle:

Link: https://docs.python.org/3/library/pickle.html

The [pickle](https://docs.python.org/3/library/pickle.html#module-pickle) module implements binary protocols for serializing and de-serializing a Python object structure. “Pickling” is the process whereby a Python object hierarchy is converted into a byte stream, and “unpickling” is the inverse operation, whereby a byte stream (from a [binary file](https://docs.python.org/3/glossary.html#term-binary-file) or [bytes-like object](https://docs.python.org/3/glossary.html#term-bytes-like-object)) is converted back into an object hierarchy. Pickling (and unpickling) is alternatively known as “serialization”, “marshalling,” [1](https://docs.python.org/3/library/pickle.html#id7) or “flattening”; however, to avoid confusion, the terms used here are “pickling” and “unpickling”.

OS:

Link: https://www.geeksforgeeks.org/os-module-python-examples/#:~:text=The%20OS%20module%20in%20python,using%20operating%20system%20dependent%20functionality.&text=path\*%20modules%20include%20many%20functions%20to%20interact%20with%20the%20file%20system.

The OS module in python provides functions for interacting with the operating system. OS, comes under Python’s standard utility modules. This module provides a portable way of using operating system dependent functionality. The \*os\* and \*os.path\* modules include many functions to interact with the file system.

The

cv2.dnn.blobFromImage

  and

cv2.dnn.blobFromImages

  functions

Link:

https://www.pyimagesearch.com/2017/11/06/deep-learning-opencvs-blobfromimage-works/