

Real world Machine Learning Projects with Scikit-learn

Subtitle - *Build real-world projects, models, & train them using machine learning algorithms with Scikit-learn.*

Topic

- Scikit-learn is a free machine learning library for the Python programming language.
- It simplifies various classification, regression and clustering algorithms including support vector machines, random forests, gradient boosting, k-means and DBSCAN, and is designed to interoperate with the Python numerical and scientific libraries NumPy and SciPy.

Why this topic?

- SDNG shows a similar book on Mastering Machine Learning with Scikit-learn having an LTV of 34500+ GBP
- Google [trends](#) shows a rising trend for Scikit-learn which suggest this is a good area.

Target customer

- Ideal for machine learning engineers who would like to use Machine Learning for building and training models in real-world projects.
- They need to know basic Machine Learning.
- They should know Python.

Their problem

- In machine learning, there's something called the "[No Free Lunch](#)" theorem. In a nutshell, it states that no one algorithm works best for every problem, and it's especially relevant for supervised learning (i.e. predictive modelling).
- They want to build different machine learning projects for different usage to solve real-world problems.
- They want to know how to implement machine learning algorithms in their projects using Scikit-learn.

Our solution

- You will explore, in depth, topics such as data mining, classification, clustering, regression, predictive modeling, anomaly detection, and more.

- You will use multiple algorithms by means of small projects and explore which algorithms are used to solve what kind of problems and when to use it.
- You will cover projects which implements K-Means Clustering, Principal Component Analysis, Customer Segmentation (Market Segmentation Analysis).
- You will learn to build real world projects which implements algorithms like Predictive Models, Classification and Regression Trees, Decision trees, Naive Bayes, k-Nearest Neighbours, Learning Vector Quantization, Support Vector Machines.
- Projects can be to use a Census Bureau Data with Random Forests to make numerical predictions with the same census data.
- You will be implementing these algorithms in practical hands-on projects building data models and understanding how it works by using different types of algorithm.
- By the end of this you will feel comfortable and confident after learning Machine Learning Algorithms and building projects in Scikit-learn.

Risk mitigation

- No risks seen so far.

Author