**Machine Learning with Tree-Based Models in Python**

### Course Description

Decision trees are supervised learning models used for problems involving classification and regression. Tree models present a high flexibility that comes at a price: on one hand, trees are able to capture complex non-linear relationships; on the other hand, they are prone to memorizing the noise present in a dataset. By aggregating the predictions of trees that are trained differently, ensemble methods take advantage of the flexibility of trees while reducing their tendency to memorize noise. Ensemble methods are used across a variety of fields and have a proven track record of winning many machine learning competitions. In this course, you'll learn how to use Python to train decision trees and tree-based models with the user-friendly scikit-learn machine learning library. You'll understand the advantages and shortcomings of trees and demonstrate how ensembling can alleviate these shortcomings, all while practicing on real-world datasets. Finally, you'll also understand how to tune the most influential hyperparameters in order to get the most out of your models.