



MACHINE LEARNING Master

Delivery mode: self-paced, onsite, live online

Course length: 2 day

Target Audience: Data Scientist

Prerequisite courses: Machine Learning Professional



Data Engineer



Business Analyst



Domain Expert



Data Scientist



Executive



Administrator

Implement advanced machine learning techniques in RapidMiner.

Overview

This course provides the opportunity to directly work on creating and modifying RapidMiner Processes to build powerful predictive models and handle complex machine learning challenges.

In addition to *Machine Learning Professional*, consider taking *Applications & Use Cases Professional*, *Data Engineering Professional* and *Data Engineering Master* before this course.

Course Objectives

- Cross Validation
- Parameter Optimization
- Ensemble Models for Classification and Regression
- SVMs and Deep Learning
- Model Selection
- Feature Engineering
- Time Series
- Integrate R and Python Models



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Machine Learning Master Topic Guide:

Use Ensemble Models for Classification and Regression including:

Vote, Bagging, Random Forest and Boosting.

Learn how to use and understand models for supervised learning including:

Support Vector Machines and Deep Learning.

Review Cross Validation, how it works, when to use it and the available outputs.

Practice automated Parameter Optimization.

This is primarily with Optimize Parameters (Grid) and secondarily with Optimize Parameters (Evolutionary).

Review Model Selection considerations and tradeoffs.

Review when Understandability of the model is important

Discuss how to evaluate Model Performance or predictive power. It can be measured many ways. *Accuracy*, *AUC*, and *squared correlation* are a few of the most common methods. *Costs*

Discuss when Runtime or computational performance is important.

Practice Feature Engineering techniques including:

Date to Numerical and Nominal to Numerical coding methods, Attribute selection like Forward Selection or Backward Elimination, Evolutionary methods and Automatic Feature Engineering.

Learn about Time Series and Forecasting.

Practice Transformation and Feature Extraction with Time Series.

Review Time series Decomposition.

Review forecasting techniques.



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We designed our program with the most common user personas and the required areas of expertise for applied data science in mind:

