

RX-M - Practical Machine Learning with Python

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| Code: | CN2-Python-ML |
| Length: | 3 days |
| URL: | View Online |

Machine learning is a type of artificial intelligence wherein computer programs learn new capabilities when exposed to data. This course teaches the basics of machine learning with practical hands on labs using Python and various support libraries.

Day one introduces the foundational concepts of data science and machine learning. Hands on labs progressively build a basic collection of tools and experiments reinforcing the concepts covered in lecture. Attendees will learn how to create a basic Python development environment for machine learning while producing several basic but useful and instructive programs. Basic probability, statistics and basic data curation skills are developed throughout.

Days two and three build on the foundational skills imparted in day one, introducing formal classification of the most common machine learning algorithms and their purposes. Modules and labs give attendees experience using the most common algorithms and a chance to create real solutions, such as fraud detection and recommendation engines.

Upon completion attendees will have a broad but practical understanding of machine learning and a base from which to pursue real applications and further study.

Skills Gained

- This course is designed to provide attendees with a practical introduction to machine learning using Python.

Who Can Benefit

- Application developers, analysts and data scientists

Prerequisites

- Each attendee should be familiar with Python and will require the ability to run a 64 bit virtual machine (provided with the course). Basic Linux command line skills are valuable but not required.

Course Details

Practical Machine Learning with Python

- Day 1

1. Data Science and Machine Learning
2. Probability and Statistics

3. Working with and curating data

4. The machine learning process

- Day 2

1. Classification algorithms

2. Nearest neighbors

3. Reducing dimensionality

4. Linear and polynomial regression

- Day 3

1. Decision trees and ensemble methods

2. Probability based learning

3. Evaluation and hyperparameter tuning

4. Deep Learning

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