

Advanced Python for Data Analysis (Machine Learning)

The Advanced Python Course will lay out the basic principles of Machine Learning in data science and how to apply it in your modelling and data analysis challenges. We will cover advanced workflows and predictive models that can significantly expand your possibilities.

Who is this course for?

This course is meant for people who have taken the Basic Python Course, or have significant experience with the python language and the most commonly used libraries. We will start from the assumption that you have a working knowledge of python notebooks using Jupyter Lab.

How can this course benefit your career?

- You will learn about predictive analytics and how to produce forecasts from datasets
- You will see how to let the machine build statistical models by learning through data
- You will learn how to select a neural network typology for your models
- You will learn the distinction between models of supervised learning and unsupervised and when each applies
- You will see applications of predictive modelling in your areas of interest

How can I prepare for this course?

Attendants to this course are advised to bring their own computer with the Anaconda Distribution of python 3.8 installed as well as Docker Desktop for your platform, you can get it for free here <https://www.docker.com/get-started>

| | Day 1 (12 Oct) | Day 2 (13 Oct) |
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| theme | <i>overview and predictive analytics</i> | <i>Neural Networks and applied ML</i> |
| morning block #1 9.30 - 11.00 | Recap Jupyter Lab, Machine Learning frameworks in Python | Neural Network modelling for Machine Learning, Types of Neural Networks |
| 11.00 - 11.15 | short break | short break |
| morning block #2 11.15 - 12.30 | An introduction to advanced Python workflows with Docker | Supervised vs Unsupervised Machine Learning |
| 12.30 - 13.30 | lunch break | lunch break |
| afternoon block 13.00 - 16.00 | Predictive analytics: regressions, decision trees | Machine Learning Applications |
| 16.00 - 17.00 | exercises | exercises |