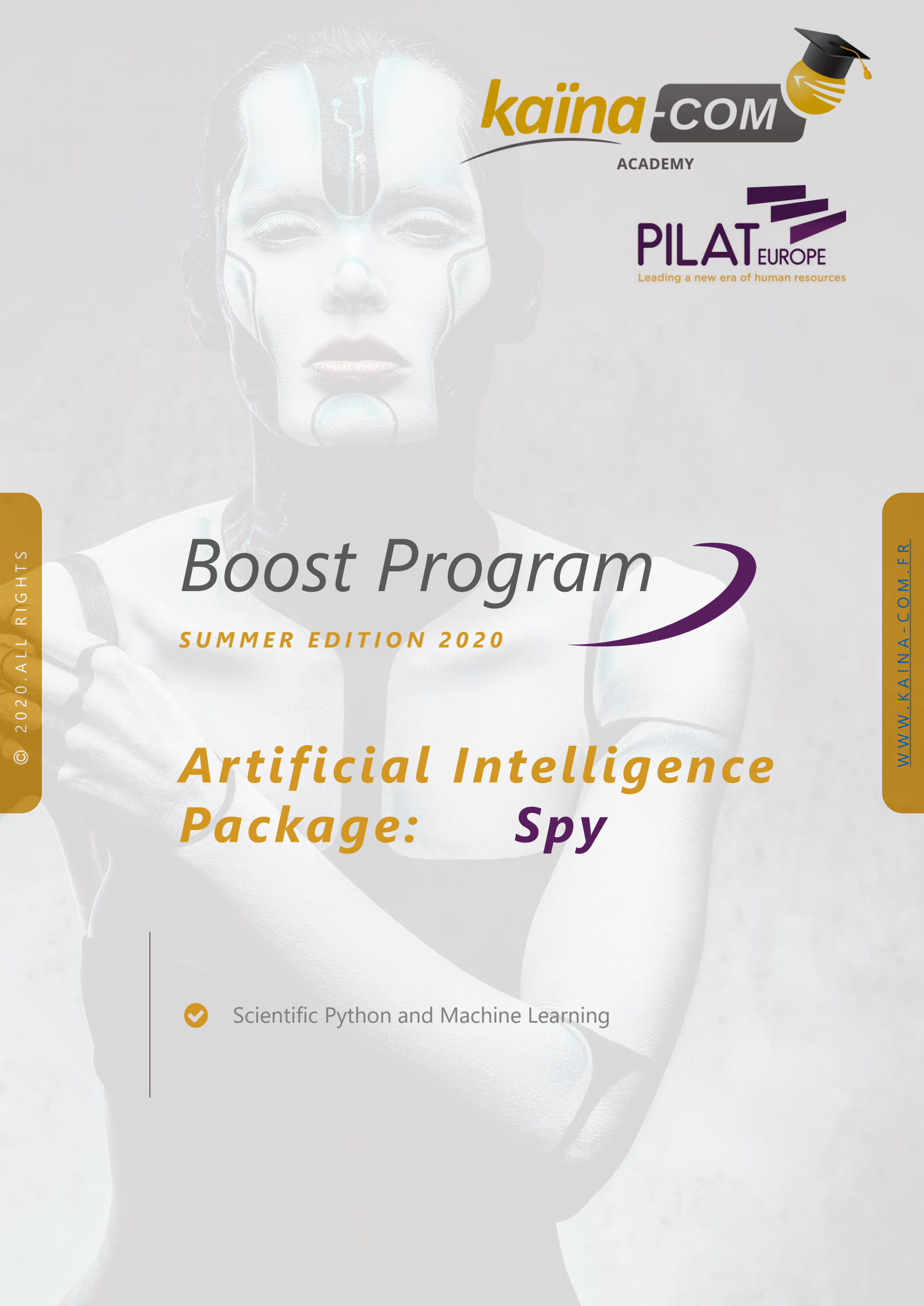

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SUMMER EDITION 2020

Artificial Intelligence Package: Spy

- Scientific Python and Machine Learning

Training Catalogue
02/07/2020

KAÏNA-COM
TRAINING CATALOGUE

Scientific Python and Machine Learning

Introduce the main building blocks of the language, relevant for the data scientist; its most important libraries such as NumPy, Pandas and Scikit-learn, as well as its newest additions around data presentation and parallelism

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KDS003 – Scientific Python and Machine Learning

Reference KDS003

Experience
- ☐ Beginner
- ☒ Intermediate
- ☐ Advanced

Duration Training Program:
- 2 days

Training Method
- ☐ I: i-learning, individual training (web-based training)
- ☒ V: v-learning, virtual class
- ☐ C: c-learning, classroom training

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77127 Lieusaint - France

Prerequisite One to two years programming skills in any other languages, and the introduction to machine learning basic course.

Audience Data Scientist, High level Managers, Presale Managers, IT Managers, QA and Technical Support or those who wants to know better about Scientific Phyton and ML.

Continued on next page

KDS003 – Scientific Python and Machine Learning, Continued

Objective

Data scientists use algorithms and frameworks which enables computers to solve problems that are classified on a higher complexity level than traditional algorithms.
Probably the most successful frameworks, gaining high acceptance both in academy and by major businesses is the Python open source language.
First released in 1989, Python is a fast, object oriented, portable, scientific, enterprise, back-end and front-end application development framework. Focusing on readability and fast deployment, it is the ideal tool for the modern data scientist.
In this course we will introduce:

- the main building blocks of the language,
- relevant for the data scientist;
- its most important libraries such as NumPy, Pandas and Scikit-learn,
- its newest additions around data presentation and parallelism.

We will review various use cases and implement mini-labs in Python.
Understand the different tools available for the data scientist in Python, best practices, and design patterns.

Continued on next page

KDS003 – Scientific Python and Machine Learning, Continued

Course Contents

Course Contents :

Table 1: KDS003 - Course Contents (Day#1)

Chapter	Description
Introduction to Python	• Development environment • Basic constructs, functions, scopes, classes and objects, main collections • NumPy and Pandas • Developing machine learning algorithms in Python • Validation in Python • Time series analysis using Python.
Scikit-learn library and tools	• Preprocessing • Correlation, feature selection and reduction • Model selection • Linear models • Basic trees

Continued on next page

KDS003 – Scientific Python and Machine Learning, Continued

Course Contents, continued

Table 2: KDS003 - Course Contents (Day#2)

Chapter	Description
Algorithms and Estimators	• Clustering and classification • Trees and SVM • Validation strategies • Plotting results
Advanced Topics	• ANN and Deep learning • Parallel distribution • Cloud services • Lab presentation – recommendation system
Summary including Q&A	• Summary including Q&A