

ACADEMY



# Boost Program

# SUMMER EDITION 2020

# Artificial Intelligence Package: ML



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Introduction to Machine Learning



Training Catalogue 02/07/2020

# KAÏNA-COM TRAINING CATALOGUE

**Introduction to Machine Learning** 

# Introduce the concepts of machine learning, the problem sets it can solve, basic algorithms and tools as well as hands-on experience with working with those algorithms





Nos locaux KAÏNA-COM France LE CARRÉ HAUSSMANN II 6 Allée de la Connaissance 77 127 Lieusaint





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# **KDS005** – Introduction to Machine Learning

Experience       Beginner         Intermediate       Advanced         Duration       Training Program: <ul> <li>1 day</li> </ul> Training       I: i-learning, individual training (web-based training)         Method       V: v-learning, virtual class         C: c-learning, classroom training         KAÏNA-COM         LE CARRÉ HAUSSMANN II,         6 Allée de la Connaissance         77127 Lieusaint - France         Prerequisite         Basic programming skills in Python, C, Java or other languages         Audience         Data Scientist, High level Managers, Presale Managers, IT Managers, QA and Technical Support or those who wants to Understand more about the problem set solved by machine learning as well as the algorithms and methods used by machine learning.	Reference	KDS005		
<ul> <li>• 1 day</li> <li>Training</li> <li>I: i-learning, individual training (web-based training)</li> <li>V: v-learning, virtual class</li> <li>C: c-learning, classroom training</li> <li>KAÏNA-COM</li> <li>LE CARRÉ HAUSSMANN II,</li> <li>6 Allée de la Connaissance</li> <li>77127 Lieusaint - France</li> <li>Prerequisite</li> <li>Basic programming skills in Python, C, Java or other languages</li> <li>Audience</li> <li>Data Scientist, High level Managers, Presale Managers, IT</li> <li>Managers, QA and Technical Support or those who wants to</li> <li>Understand more about the problem set solved by machine learning as well as the algorithms and methods used by machine learning.</li> </ul>	Experience	Intermediate		
Method       Image: Section of the sectin of the section of the section of the section	Duration			
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Continued on next page	Audience	Managers, QA and Technical Support or those who wants to Understand more about the problem set solved by machine learning as well as the algorithms and methods used by machine learning.		











#### KDS005 – Introduction to Machine Learning, Continued

**Objective** Understand the problem set solved by machine learning as well as the algorithms and methods used by machine learning. Hands-on experience in using ML tools.

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## KDS005 – Introduction to Machine Learning, Continued

Course Contents

**Course Contents :** 

#### Table 1: KDS005 - Course Contents

Chapter	Description
	<ul><li>Why we need it</li><li>What it can and can't do</li></ul>
Introduction to machine learning	<ul> <li>Limitations</li> <li>Heuristics</li> </ul>
learning	– not really smart
	<ul> <li>Supervised and unsupervised methods</li> </ul>
Python with numpy & scipy	<ul> <li>Intro to working environment: Python with numpy &amp; scipy</li> </ul>
Machine learning algorithms	Machine learning algorithms
Short review and hands-on programming exercise for each	<ul> <li>Naïve base</li> <li>SVM</li> <li>Decision trees</li> <li>Regression (linear prediction)</li> <li>Outliers extractions</li> <li>Feature scaling</li> <li>PCA</li> </ul>
Whats next?	<ul> <li>Machine learning platforms by Apache, Matlab, Amazon</li> </ul>
Examples	<ul> <li>Well select one example according to student preferences         <ul> <li>Machine learning and classification in communication and DPI</li> <li>Machine learning in advertisement optimization</li> <li>Machine learning in Image processing</li> </ul> </li> </ul>

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## KDS005 – Introduction to Machine Learning, Continued

Course Contents, continued	Table 2: KDS005 - Course Contents			
	Chapter	Description		
	Summary including Q&A	<ul> <li>Summary Exercise → Processing path:</li> <li>Image processing &amp; scaling -&gt;Computer vision feature extraction -&gt;Machine Learning classifier</li> <li>Q&amp;A</li> </ul>		







