

[MNA002] MACHINE LEARNING

GENERAL INFORMATION

Studies	MASTER DEGREE IN DATA ANALYSIS, CYBERSECURITY AND CLOUD COMPUTING		Subject	Data Analysis
Semester	1	Course	1	Mention / Field of specialisation
Character	COMPULSORY		Language	ENGLISH
Plan	2019	Modality	Adapted Face-to-face	
Credits	3	Hours/week	0	Total hours 32 class hours + 43 non-class hours = 75 total hours

PROFESSORS

IZAGIRRE AIZPITARTE, UNAI

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
(No specific previous subjects required)	(No previous knowledge required)

SKILLS

VERIFICA SKILLS

SPECIFIC

MNCE02 - Designing, developing and implementing pre-processing and data modelling techniques to predict, classify and group them, being able to interpret and validate the models created for the extraction of knowledge

CROSS

MNCTR1 - Ability to work in multidisciplinary teams and in a multilingual environment (Basque/Spanish/English) and to communicate, both orally and in writing, knowledge, procedures, results and ideas related to the life cycle of the data, cybersecurity, and development and operations.

BASIC

M_CB10 - To have learning skills and the capacity for self-guided or independent subsequent learning.

CONTENTS

- Data preprocessing
- * Cleansing
- * Transformations
- * Missing values and outliers
- * Variable selection/extraction/discretization
- * Imbalanced data treatment
- Data analysis
- * Problem taxonomy: classification, regression and clustering
- * Model families
- * Model selection
- * Model validation

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Subject notes	http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_in k.pl?grupo=MASTERDATUANALISIA11&ejecuta=10&
Technical articles	
Topic related web quires	
Moodle Platform	
Class presentations	
Computer practical training	
Slides of the subject	

Specific Master Software