Machine Learning for Business Decision Making

Academic Year: (2019 / 2020) **Review date: 03/05/2019 10:46:37**

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: ALER MUR, RICARDO

Type: Compulsory ECTS Credits : 6.0

Year : 4 Semester : 1

OBJECTIVES

CB1. That students show to have knowledge in an area of study that starts from a base in secondary education, and reaches a level that, although supported by advanced textbooks, also includes some aspects from the forefront of his field of study.
CB2. That students know how to apply their knowledge to their work or vocation in a professional way and possess the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study
CB3. That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments on relevant issues of social, scientific or ethical nature
CG3. To be able to manage, identify, gather and interpret relevant information on issues related to business in the digital age.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction to Data Mining and Data Analytics
2. Data Extraction and Exploration
3. Feature Generation and Selection
4. Classification Models
5. Regression Models
6. Evaluation and Deployment
7. Data Clustering
8. Associative Learning

LEARNING ACTIVITIES AND METHODOLOGY

AF1. THEORETICAL-PRACTICAL CLASSES. They will present the knowledge that students should acquire. They will receive the class notes and will have reference texts to facilitate the follow-up of the classes and the development of the subsequent work. Exercises, practical problems on the part of the student will be solved and workshops and evaluation tests will be carried out to acquire the necessary skills.
AF2. TUTORING. Individual or group.
AF3. INDIVIDUAL OR GROUP STUDENT WORK.
MD1 THEORY CLASS. Lectures with support of computer and audiovisual media, in which the main concepts of the subject are taught and the materials and bibliography are provided to complement the students' learning.
MD2. PRACTICES. Resolution of practical cases individually or in group.
MD3. TUTORING. Individual or group. For 6 credit courses, 4 hours with 100% attendance.

ASSESSMENT SYSTEM

% end-of-term-examination/test:	30
% of continuous assessment (assigments, laboratory, practicals…):	70

SE1. FINAL EXAM. In which the knowledge, skills and abilities acquired throughout the course will be assessed globally.
SE2. CONTINUOUS ASSESSMENT. exercises, assignments and tutorials will be evaluated.

BASIC BIBLIOGRAPHY

- Ian H. Witten, Eibe Frank, Mark A. Hall, Christopher J. Pal Data Mining: Practical Machine Learning Tools and Techniques, Morgan Kaufmann, 2016

- Max Kuhn, Kjell Johnson Applied Predictive Modeling, Springer, 2018