IDENTIFICATION DETAILS

Degree: Computer Engineering
Field of Knowledge: Engineering and Architecture
Faculty/School: Senior Polytechnic School
Course:
Type: Compulsory
ECTS credits: 6
Year: 4
Code: 3657
Teaching period: Seventh semester
Area: Computing
Module: Specific Technology
Teaching type: Classroom-based
Language: Spanish
Total number of student study hours: 150

SUBJECT DESCRIPTION

The Statistical Learning and Data Mining course provides students with the theoretical and practical bases to successfully analyse a range of information and to extract reliable information through the exploration of content. Its theoretical foundations come from artificial intelligence and statistical learning. In addition to introducing students to quality of data, the most common statistical learning and data mining techniques are studied.

SKILLS

Basic Skills
Students must have demonstrated knowledge and understanding in an area of study that is founded on general secondary education. Moreover, the area of study is typically at a level that includes certain aspects implying knowledge at the forefront of its field of study, albeit supported by advanced textbooks.

Students must be able to apply their knowledge to their work or vocation in a professional manner and possess skills that can typically be demonstrated by coming up with and sustaining arguments and solving problems within their field of study.

Students must have the ability to gather and interpret relevant data (usually within their field of study) in order to make judgments that include reflections on pertinent social, scientific or ethical issues.

Students must be able to convey information, ideas, problems and solutions to both an expert and non-expert audience.

Students must have developed the learning skills needed to undertake further study with a high degree of independence.

**General Skills**

An ability to conceive and develop computer systems or architectures that are centralised or distributed, integrating hardware, software and networks.

**Specific skills**

An awareness of and the ability to develop computational learning techniques and to design and implement applications and systems using said techniques, including those devoted to the automatic extraction of information and knowledge from large bodies of data.

Conocer ampliamente los enfoques de minería de datos, de acuerdo a la norma CRISP-DM

Conocer los entornos de aplicación de minería de datos clásicos y actuales y los aspectos éticos del conocimiento obtenido

Comprender los fundamentos estadísticos y matemáticos de las técnicas de minería de datos

Dominar con soltura las herramientas de análisis que se emplean a lo largo del curso

Saber seleccionar los modelos y técnicas de minería de datos más apropiados para resolver casos prácticos y en su evaluación de acuerdo a su precisión y coste

Saber extraer hipótesis relevantes sobre el resultado obtenido y comprobarlas

Realizar una interpretación crítica de los resultados obtenidos

Saber representar el modelo y generar informes que incrementen la inteligencia del negocio o permitan visualizar los objetivos perseguidos

**DISTRIBUTION OF WORK TIME**

<table>
<thead>
<tr>
<th>CLASSROOM-BASED ACTIVITY</th>
<th>INDEPENDENT STUDY/OUT-OF-CLASSROOM ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>68  hours</td>
<td>82  hours</td>
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