

340458 - MIDA-I7P23 - Data Mining

Coordinating unit: 340 - EPSEVG - Vilanova i la Geltrú School of Engineering
 Teaching unit: 723 - CS - Department of Computer Science
 Academic year: 2019
 Degree: BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2018). (Teaching unit Optional)
 BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
 ECTS credits: 6 Teaching languages: Catalan

Teaching staff

Coordinator: MARIO MARTÍN MUÑOZ
 Others: MARIO MARTÍN MUÑOZ

Degree competences to which the subject contributes

Specific:

- CEC07. Ability to learn and develop techniques of computing learning and design and implement applications and systems which use them, including those dedicated to automatic information and knowledge extraction from large data volumes.
- CEIS4. Ability to identify and analyze problems and design, develop, deploy, test and document software solutions based on an adequate knowledge of theories, models and techniques.

Transversal:

- ENTREPRENEURSHIP AND INNOVATION: Knowing about and understanding how businesses are run and the sciences that govern their activity. Having the ability to understand labor laws and how planning, industrial and marketing strategies, quality and profits relate to each other.

Learning objectives of the subject

Study load

Total learning time: 150h	Hours large group:	30h	20.00%
	Hours medium group:	0h	0.00%
	Hours small group:	30h	20.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

340458 - MIDA-I7P23 - Data Mining

Content

(ENG) 1. Introducció a la Mineria de Dades.

Degree competences to which the content contributes:

(ENG) 2. Caracterització i preparació de dades

Degree competences to which the content contributes:

(ENG) 3. Introducció a la classificació

Degree competences to which the content contributes:

(ENG) 4. Naive Bayes i Veïns propers

Degree competences to which the content contributes:

(ENG) 5. Arbres de decisió.

Degree competences to which the content contributes:

(ENG) 6. Xarxes Neuronals

Degree competences to which the content contributes:

(ENG) 7. Maquines de support vectorial y boosting

Degree competences to which the content contributes:

(ENG) 8. Clustering

Degree competences to which the content contributes:

(ENG) 9. Regles d'associació

Degree competences to which the content contributes:

340458 - MIDA-I7P23 - Data Mining

Planning of activities

(ENG) PRIMER PARCIAL

(ENG) SEGON PARCIAL

(ENG) ACTIVITAT 1

(ENG) ACTIVITAT 2

(ENG) PRÀCTICA

Bibliography

Basic:

Kantardzic, Mehmed. Data mining : concepts, models, methods, and algorithms [on line]. 2a ed. New Jersey: IEEE Press, 2011 [Consultation: 07/10/2014]. Available on: <<http://onlinelibrary.wiley.com/book/10.1002/9781118029145>>. ISBN 9781118029145.

Han, Jiawei ; Kamber, Micheline ; Pei, Jian. Data mining : concepts and techniques [on line]. 3rd ed. Burlington: Morgan Kaufmann, 2012 [Consultation: 07/10/2014]. Available on: <<http://proquest.safaribooksonline.com/9780123814791?uicode=politicat>>. ISBN 9780123814791.

Bramer, Max. Principles of data mining. 2nd ed. London: Springer, cop. 2013. ISBN 9781447148838.

Flach, Peter A. Machine learning : the art and science of algorithms that make sense of data. Cambridge [etc.]: Cambridge University Press, 2012. ISBN 9781107096394.

Witten, Ian H.; Frank, Eibe; Hall, Mark A. Data mining : practical machine learning tools and techniques [on line]. 3rd ed. Burlington: Morgan Kaufmann, 2011 [Consultation: 07/10/2014]. Available on: <<http://proquest.safaribooksonline.com/9780123748560?uicode=politicat>>. ISBN 9780123748560.

Complementary:

The Top ten algorithms in data mining. Boca Raton: CRC Press, 2009. ISBN 9781420089646.

Hastie, Trevor; Tibshirani, Robert; Friedman, Jerome. The elements of statistical learning : data mining, inference, and prediction. 2nd ed. New York [etc.]: Springer, cop. 2009. ISBN 9780387848570.

Segaran, Toby. Programming collective intelligence : building smart web 2.0 applications. Beijing: O'Reilly, cop. 2007. ISBN 9780596529321.

Conway, Drew; White, John Myles. Machine learning for hackers. Sebastopol: O'Reilly, 2012. ISBN 9781449303716.

Harrington, Peter. Machine learning in action. Shelter Island, N.Y: Manning Publications Co., 2012. ISBN 9781617290183.