Data mining 781 (COS 781)

Qualification	Postgraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	15.00
Programmes	BIT Information Technology
	BScHons Computer Science
	BSc Geology
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	English
Academic organisation	Computer Science
Period of presentation	Semester 1 or Semester 2

Module content

Data mining is the extraction of novel knowledge, or hidden patterns, from large data bases. The focus of this course is on how the computational intelligence techniques (such as evolutionary algorithms, swarm algorithms and neural networks) can be used for knowledge extraction. In addition, traditional machine learning techniques (such as decision trees and rule induction) will be covered. The pre-processing of data in preparation for data mining algorithms, as well as the post-processing of results after data mining, will be discussed. Exploratory data analysis and statistical data mining methods are also investigated. Finally, some attention will be given to more modern problems, such as the extraction of hidden knowledge from unstructured data, such as text and images. It is highly recommended that students do COS710 and COS711, as knowledge of these modules are assumed.