CAP-5771 Principles of Data Mining

Catalog Description
Principles of data mining concepts, knowledge representation, inferring rules, statistical modeling, decision trees, association rules, classification rules, clustering, predictive models, and instance-based learning. (3 credits)

Prerequisites
Graduate Standing

Type
Elective graduate courses

Course Objectives
After completing this module, students will be able to

- Demonstrate an understanding of principles and theoretical foundations behind major data mining approaches
- Demonstrate an understanding of current research issues in data mining
- Undertake the systematic and comparative evaluation of data mining procedures
- Select and apply data mining techniques to the solutions of real world problems

Topics
- Data Mining Introduction
- Data Exploration and Visualization
- Data Preprocessing
- Classification
- Association Analysis
- Sequential pattern mining
- Advanced pattern mining
- Cluster Analysis
- Anomaly Detection

Textbook
- Pang-Ning Tan, Michael Steinbach and Vipin Kumar. Introduction to Data Mining. Addison Wesley, 2005.

References

Last Update
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