CAP 6778 Advanced Data Mining and Machine Learning

Credits: 3 credits

Text book, title, author, and year: (1) Data Mining: Practical Machine Learning Tools and Techniques, by I.H. Witten and E. Frank (2) Selected articles and papers are posted on the course we site.

Reference materials: N/A

Specific course information:

Catalog description: The study of advanced topics in data mining and machine learning. Current research issues in data mining and its application in computer network security, computer science and software engineering.

Prerequisites: Prerequisites: CAP 5615 or CAP 6635 or CAP 6673 or equivalent courses. COP 6579 can be used as a technical elective in all CS, CE and EE graduate programs.

Specific goals for the course: Students will learn advanced data mining and machine learning techniques. Case studies with an emphasis on real world applications will be presented.

Brief list of topics to be covered:

1. Association Rules

2: Rule Based Modeling

3: Bayesian Learning

4. Ensemble Learning

5. Quality of Data

6. Web Mining

7. Feature Selection

8. Applications and Trends in Data Mining

9. Case Studies