ONE PAGE COURSE OVERVIEW

Course Title: D212 - Data Mining II

Course Description:
Data Mining II adds vital tools to data analytics arsenal that incorporates unsupervised models. This course explains when, how, and why to use these tools to best meet organizational needs.

Competencies:

a. Clustering Techniques: Apply clustering techniques to accurately predict outcomes of interest.
b. Dimension Reduction Methods: Implement dimension reduction methods to identify significant variables.
c. Pattern Prediction: Predicts patterns in data using association rules and lift analysis.

Performance Assessment (PA): Task covering the above competencies and involving:

Task 1 - You will use Python or R to analyze your selected data dictionary and data set files based on the given criteria and create a data mining report in a Microsoft Word. You will use K-means and Hierarchical in your analysis.

Task 2: You will be given two scenarios to analyze and create a data mining report in a Microsoft Word.
Scenario 1: You will be asked to use principal component analysis (PCA) to analyze customer data to identify the principal variables of your customers, ultimately allowing better business and strategic decision-making.

Scenario 2: You will be asked to use PCA to analyze patient data to identify the principal variables of your patients, ultimately allowing better business and strategic decision-making for the hospital.

Task 3: You will use Python or R to analyze your selected data dictionary and data set files based on the given criteria and create a data mining report in a Microsoft Word. You will use Market Basket and Apriori Algorithm in your analysis.

Tools and Techniques: Python or R. (Students can choose). Clustering techniques (K-means and Hierarchical).

Resources:
Automatically Enrolled: DataCamp Videos