INSE6210 (Fall 2020) Assignment (Due November 23, 2020)

Instructor: Dr. Nizar Bouguila

1. Provide an R or python implementation of the Apriori algorithm. Provide also a testing example (a Data set and a final result).
2. Develop an algorithm for decision tree induction and implement it in R or Python. Provide also a testing example (a Data set and a final result).
3. Explain the naïve Bayes approach in both the discrete and continuous cases. Provide implementations in R or python. Provide also a testing example (a Data set and a final result).
4. In a maximum of two pages, summarize the idea behind SVM, the main equations and kernels used. Provide an implementation in R or python. Provide also a testing example (a Data set and a final result).
5. Read the following two papers:

- H. Cheng, X. Yan, J. Han, and C.-W. Hsu, "Discriminative Frequent Pattern Analysis for Effective Classification", ICDE'07.
- H. Cheng, X. Yan, J. Han, and P. S. Yu, "Direct Discriminative Pattern Mining for Effective Classification", ICDE'08
  Summarize and discuss the approaches presented in both papers. Bonus; for implementing one of the two papers.