

CSE 494: Artificial Intelligence for Cyber Security: Spring 2019

Lab 5: A-Priori rule mining learning

Objectives of the lab:

- Introduce the students into association rule mining concept.
- Explore how to generate frequent item sets using A-priori principle.
- Implement and test the learning outcomes and apply the techniques to extract rules from real world dataset.

The first part of the demo would be a demo on the association rule mining (20 min.) - to refresh your knowledge on association rule mining, you may take a brief look into

https://www3.cs.stonybrook.edu/~cse634/lecture_notes/07apriori.pdf (slides from stonybrook university)

- 1- Using a dataset to examine frequent itemsets:
 - a. Exploring apriori library by feeding a simple datasets and see the effect of support and confidence after eliminating the infrequent items.
 - b. Explain how to get the length of a frequent itemset
 - c. Explain one-hot encoding.
 - d. Understanding practical issues of applying apriori algorithm.