Assignment 2: Intrusion Detection using Machine Models

10 Points Possible

8/31/2024

Attempt 1

In Progress

NEXT UP: Submit Assignment

Add Comment

Unlimited Attempts Allowed

7/30/2024 to 8/31/2024

Details

Problem Statement

Build a network intrusion detector, a predictive model capable of distinguishing between **bad (Attacks)** and **good (Normal)** connections

Dataset to Use

KDD Cup 1999 dataset (http://kdd.ics.uci.edu/databases/kddcup99/kddcup99.html)**Process Steps**

Steps involved to create the text summary

- Data pre-processing
- Data correlation
- Feature selection
- Modelling
  - Naïve Bayes algorithm
  - Decision Tree algorithm
  - Random Forest algorithm
  - SVM algorithm
- Validation & Comparison among different algorithms

Perquisites

- Python 3
- NLTK Toolkit
- IDE or Text Editor

Submission Instructions

A PDF document has to be uploaded on Canvas under ‘Assignment’ covering following:

- Overall process description & solution approach
- Tool used and reasons to use this specific tool
- Source code snippets

- Final output results and analysis of results

Note: Each document page should have student's BITS Id.

References

Refer following for detailed steps and examples of text summarization case studies.

https://www.geeksforgeeks.org/intrusion-detection-system-using-machine-learning-algorithms/ (https://www.geeksforgeeks.org/intrusion-detection-system-using-machine-learning-algorithms/)

Evaluation Criteria

The assignment is for 10 marks. Following evaluation scheme will be used to grade the assignments:

S.No.	Evaluation Task	Marks
1	Overall solution design and process architecture	3
2	Tool used and reasons to use this specific tool	2
3	Final output results and analysis of results	3
4	Document quality (structure, detailing, presentation etc)	2

Choose a submission type.

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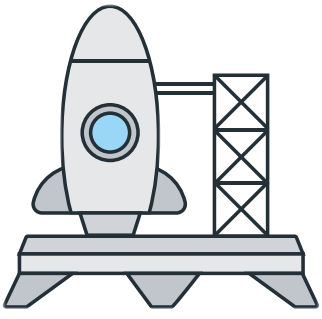

or

Webcam Photo