***Machine Learning Report***

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***Introduction:***

*Internet rising the issue of cyber threats. Hackers attacks such as Ransomware, Phishing, Data Leakage, Hacking are very common. The Internet firewall dataset is classifying which internet request should be allow, deny,drop or reset.*

***Proposed Methodology:***

1. *Pre- processing*
2. *KNN*
3. *Decision tree*
4. *Naive Bayes*
5. *Logistic Regression*
6. *Evaluation matrix*
   1. *Precision*
   2. *Recall*
   3. *Accuracy*

***Dataset:***

*It has 12 features*

1. *Source Port,*
2. *Destination Port*
3. *NAT Source Port*
4. *NAT Destination Port*
5. *Action (output feature)*
6. *Bytes*
7. *Bytes Sent*
8. *Bytes Received*
9. *Packets*
10. *Elapsed Time (sec)*
11. *pkts\_sent*
12. *pkts\_received*

*Instances 65533*

*It is class classification dataset. It has*

***Refferences***

1. https://archive.ics.uci.edu/ml/datasets/Internet+Firewall+Data
2. <https://www.forcepoint.com/cyber-edu/firewall>
3. [https://www.cisa.gov/uscert/ncas/tips/ST04-004#:~:text=Firewalls%20provide%20protection%20against%20outside,or%20network%20via%20the%20internet.](https://www.cisa.gov/uscert/ncas/tips/ST04-004#:~:text=Firewalls provide protection against outside,or network via the internet.)
4. <https://link.springer.com/chapter/10.1007/978-94-024-2174-3_4>

***Video Link:***

*https://drive.google.com/drive/folders/1cnimy3B05GddbJBCTvJkQsdhs6Qh2RWJ?usp=sharing*