**PROJECT SELECTION FORM**

**Post Graduate Diploma - March 2024**

1. Names of the Member

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| Sr No. | Name | Roll No. | Signature |
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1. Title of the Project

Detection of Cyber Attacks in Network Using Machine Learning Techniques

1. Brief Description of the Project

Title: "Real Time Cyber Threat Detection using Machine Learning Techniques in Networks" which includes the detection of cyber attacks over network such as neural networks, random forest for detecting malicious threats. It allows a speedy response to any attack, reducing the damage caused and keeping all data safe, whether being on security network management systems as well as viruses protection services or involving Computer Network issues within malware problems also combatting social threats from theft of information through phishing. Every organization can generate large volumes of network traffic data, which can exist in various forms. Some of this traffic is very sensitive and needs to be protected from malicious actors to maintain an edge in the market. Traditional methods of manually inspecting network traffic to identify potential cyber attacks are impractical due to the sheer volume of data. To address this problem, we develop ML/AI techniques for detecting cyber attacks. Based on the detection, organizations can apply appropriate security measures to mitigate threats. The project involves using the \_\_\_\_\_\_\_\_\_\_ dataset and training various machine learning models, including \_\_\_\_\_\_\_\_\_\_. This approach aims to enhance cybersecurity by accurately identifying and mitigating network-based threats.



1. Software Requirements of the Project

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| Python, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, TensorFlow/Keras (for deep learning |
| models), XGBoost, Wireshark, Tcpdump, Apache Kafka, Apache Spark |

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1. Hardware Requirements of the Project

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| Multi-Core Processor (minimum 4) ex. i5, i7, ryzen5 |
| 8 GB RAM |
| 500 GB SSD Nvidia GPU |

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| **Approved By (Guides Name & Signature)** | **Date of Submission** |
|  | 9/7/2024 |

*A C T S , C - D A C B a n g a l o r e* P a g e | **1**