DEPARTMENT OF APEX INSTITUTE OF TECHNOLOGY

# PROJECT PROPOSAL

## 1. Project Title: Predictive Modelling of Malware behaviour using Advanced Machine Learning Algorithms

## 2. Project Scope: Malware constitutes a significant percentage of the total cyber attacks. The project is an innovative approach that utilizes the capabilities of signature based and behaviour based analysis for identifying and understanding the patterns associated with malware. It can help understand intricate structures and capture patterns within malicious signatures. They also allow anomaly detection by learning the normal patterns as deviations from these learned patterns can signal potential malicious activity. It will help improve the prediction methods and make the systems more secure against the known and unknown threats and vulnerabilities. The performance of the model is evaluated based on the accuracy, F1-score, precision and recall score using various machine learning models in order to integrate machine learning and cyber security.

## 3. Requirements: -

* Hardware Requirements

1. Preferably 32 GB RAM (Minimum 16 GB)
2. At least 5 GB Storage Space
3. A stable Internet Connection with Minimum Bandwidth of 30Mbps

* Software Requirements

1. Python IDE (used Kaggle)

**STUDENTS DETAILS**

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| **Name** | **UID** | **Signature** |
| KIRTPREET KAUR | 21BCS3531 |  |
| AARUSHI | 21BCS6405 |  |

**APPROVAL AND AUTHORITY TO PROCEED**

We approve the project as described above, and authorize the team to proceed.

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| **Name** | **Title** | **Signature**  **(With Date)** |
| Dr. Krishnendu Rarhi | Predictive Modelling of Malware behaviour using Advanced Machine Learning Algorithms |  |