**ASSIGNMENT 1-FORMULATION OF RESEARCH PROBLEM**

**1.MAIN RESEARCH SUBJECT AREA:**

Machine Learning and Data Science.

**2.SUB AREAS:**

1.Networking.

                   2.Machine Learning.

                   3.Data Integration.

**3.MAIN OBJECTIVE:**

1.Network traffic analysis is implemented in different areas of applications such as banking, e commerce, etc. Different traffic analysis techniques are proposed like algorithms-based prediction, time series-based prediction model, Data mining-based analysis and ML based analysis.

                2.However, detecting intrusions with better accuracy is a nightmare while analyzing vast congested traffic.

                 3.The main objective here is "Analyzing and predicting the traffic of network will improve security".

**4.SPECIFIC OBJECTIVE:**

One way of improving the security of the framework is to use machine learning to detect and propose counter measure when accessories are being manipulated. To overcome the shortcomings of earlier proposed approaches, Gated Recurrent Neural Network is employed which provides better performance in detection, prediction and classification of intrusions in the real time network traffic.