***Sylhet Engineering College***

**Tilagor, Sylhet**

**Remarks :**

**Student Name :** Ashique Jubayer

**Registration No :** 2014331518

**Student Name :** Syed Montasir Hossain

**Registration No :** 2014331532

**Course Name :** Project and Thesis

**Course Code :** CSE-700

**Department :** Computer Science and Engineering

**Expected Supervisor :** Dr. Forhad Rabbi

Associate Professor

Department Of CSE

Shahjalal University of Science & Technology

**Date of Submission :** 15th Oct, 2018

**Title :** Cyber security of IoT(Internet of Things) devices by using machine learning.

**Introduction :** The Internet of Things (IoT) has become a ubiquitous term to describe the tens of billions of devices that have sensing or actuation capabilities, and are connected to each other via the Internet. The IoT includes everything from wearable fitness bands and smart home appliances to factory control devices, medical devices and even automobiles. Security has not been a high priority for these devices until now. It is now time to establish The Internet of Secure Things. However Machine Learning can be the optimum solution for the security of IoT.

**Background and Statement of the problem :**

IoT devices, which include smart TVs, tablets, smartphones, notebooks, wearables, sensors, Nest thermostats and whatnot, will make our lives more efficient, more energy saving, more comfortable, and less costly.

But the same technology that is making yesterday’s sci-fi today’s reality is also making us more vulnerable to attacks, and is opening up new possibilities for malicious actors to target us while we’re within the comfortable confines our homes.

The reality of IoT security is pretty harsh: Many manufacturers of smart home appliance don’t know how to secure IoT devices against cyberthreats; many don’t care and are focused on functionality; and yet a huge number of IoT devices don’t even have the supporting infrastructure to run security solutions – heck, some of them don’t even have updating mechanisms. And don’t get me started on consumer negligence. Some think that encryption is all it takes to secure IoT devices.

Although there are some researchers have expressed their interest in Cyber security and there are few publications based on the security of Internet of Things. We are trying to make IoT devices’ security safe. Actually there are not many publications on IoT devices’ security. We are trying to make IoT devices more secure.

**Aim and Objectives :**  The aim of this research is to Identify and find the security problems of a consumer and solve them to make the user’s participation more secure.

As connected devices start to outnumber humans, it’ll be beyond humans alone to fight threats. We’ll need to get help from the machines to protect themselves.

Eventually,the goal is to be able to make the most use of all these connected devices that are finding their way into user’s home without having to worry about them spying on the user, harming , or becoming complicit in crimes that will be committed against the exploiter. Machine learning has proven its worth in many different areas. Hopefully, it will also help protect one of the fastest-growing sectors in the tech industry.