

Project report for Teachable Machine Image Project

**IS1103 - Information Systems Management
Bachelor of Science in Information Systems**

University of Colombo School of Computing

Group 20

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Introduction

As this is our first project in machine learning we chose **“Teachable Machines with Images”** project to go on with.

Our group’s plan is to build a security scanner that will maximize the security of ATMs and CDMs, along with banks by scanning every individual’s face who tries to enter in to premises. If the individual attempting to enter is wearing a face mask, cap, helmet, or anything else that covers his or her face, this product will display an error message stating that entry is restricted and that individual must remove the headwear in order to gain access.

Background

Teachable Machines are initiated by Google as an experimental tool for public to learn machine learning without a prior specialized knowledge and training in programming and computer science.

This project is all about **“Teachable machines with images”**. With this project we are hoping to express that with the help of modern AI tools like Teachable Machines, people are able to create simple and effective programming models quickly and efficiently that will be helpful in real life matters too.

Problem/Purpose

All of ATMs and banks now need security guards to ensure protection because of increasing robberies. We can observe that, despite the presence of security cameras, criminals are still able to rob those places by covering their faces, and as a result it is taking forever to identify those robbers.

So this product will enhance the security of those ATMs and banks by identifying and recognizing each and every individual who enter in to the premises

Solutions and Approach

Our team targets to assist to improve the security level of ATMs and banks by detecting and identifying individuals who enters, without having any security labor force. To limit or permit individual entrance, this should be integrated in to the premises' doors.

This product will enable organization to identify individuals and instantly request them to remove whatever headgear they may be wearing in order to gain the access to premises. As a result, the organization can detect and recognize every individual that enters in to the premises. Thus this will minimize robberies because, every person has to reveal their identity in order to enter the premises.

- **Instantly identify whether the person has wearing any headgear that hides their identity and request them to remove it through an alert.**
 - **Caps**
 - **Face Masks**
 - **Helmets**
 - **Anything that covers their faces**
- **Being a fully automated system which is integrated in to the doors of premises.**
- **Fully reliable and 24/7 functioning.**

Some of the past years' cases of banks being robbed by disguising their identities.

In a case like this, our security scanner will instantly lock the doors to prevent the criminals from entering. They won't be able to enter the premises unless they remove the **Full-face Helmets**, thus the risk of being robbed is practically eliminated and there will be no human threatening because this is an automated procedure.

Private Bank in Aththidiya robbed - one dismissed

Thursday, 10 August 2017 - 14:13



One security guard has died being shot by two men who came to a private bank in Aththidiya to rob the bank.

The security guard has been killed when the robbers started firing while leaving one other individual critically injured.

The injured has been admitted to the Colombo South Teaching Hospital.

Police say that the robber duo has robbed a man who visited the bank and has fled the scene.

Initial investigations have revealed that the suspects have arrived in a motor bike wearing full face helmets.

Police further states that investigations are underway in order to arrest the suspects.

Rs 1.5m stolen in Hanwella armed bank robbery

September 10, 2015 11:25 pm



Armed robbers are believed to have made away with nearly Rs 1.5 million in cash after storming the branch of a state bank in Wagakahahena in Hanwella this evening.

Police said that four gunmen had arrived on two motorcycles and entered the bank wearing helmets.

The security guard at the bank has been admitted to the Kosgama Salawa Hospital after he was attacked by the suspects who attempted to snatch his firearm.

Information has been received that the robbers had stolen almost Rs 1.5 million, police said.

TAGS : [armed robbery](#) , [Hanwella](#) , [bank robbery](#) , [full-face helmets](#) ,

Goals and Objectives

As first year undergraduates, we hope to gain novel knowledge about teachable machines, web development and how to work in a collaborative environment through online mode.

Project risks

- **Running out of time** To deal with the danger using up all available time we have plan our undertaking with a particular cutoff time from the start of the venture.
- **Technical Difficulties** To beat the technical troubles we have choose to get specialized help from our batch mates, instructors, as well as from our seniors in the university.
- **Scope Variations** To try not to get change from scope, we have wanted to examine as often as possible with our partners about finding and the advancement of the works.
- **The lack of knowledge in web development** To overcome the lack of knowledge in programming we have decided to get the help of internet and our seniors in the university.
- **Difficulties in working novel programming languages** As we all new to languages like JavaScript, P5, HTML and CSS. We will access YouTube to watch tutorials and gain knowledge in order to work out the core of this project.

Project Timeline

[illegible]

Learning Outcomes

In this project, we have selected the “**Teachable machine with images**” project. We think that at the end of the project there will be so many learning achievements.

- The first thing is we got to be familiar with a novel tool like teachable machines and get some knowledge on how these works.
- When we proceed with our project, we tend to consume more time on programming languages like Java, JavaScript, P5, and HTML, thus it improves our basic knowledge in these languages.
- In a group project, the most important thing is teamwork, this assist to improve our interpersonal skills which helps throughout our career.

Summary

