**ECEN 649, Fall 2019**

Texas A&M University

Electrical and Computer Engineering Department

Dr. Tie Lui

Project Report

**Face Detection using AdaBoost and Haar Features**

**Name: Abhay Vashist**

**UIN: 524008495**

**Date: December 5, 2019**

**Aggie Code of Honor**

**An Aggie does not lie, cheat or steal or tolerate those who do.**



Abstract

Features extraction

Haar Features

Table 1 (Feature Count)

|  |  |
| --- | --- |
| Type 1 (Horizontal Edge Detection) | 7440 |
| Type 2 (Vertical Edge Detection) | 7440 |
| Type 3 (Horizontal Line Detection) | 3462 |
| Type 4 (Vertical Line Detection) | 3462 |
| Type 5 (Angle edge detection) | 3600 |
| Total | 25424 |

The feature size was limited by two constraints, one that area of the two black and white regions must be equal and the max size of the filter is 8 by 8.