**Progress Report**

1. Report No: 1
2. Report Date:22/12/2018
3. Project Title: Face Recognition
4. Company Name: MSBC Solutions (India) Pvt Ltd.
5. Tools/Technologies: Python , Flat Database
6. Work Done: 1. Requirement Gathering

2. Overview

1. Submitted By: Mit Patel(MA033)

Meet Shah (MA043)

1. Remarks (External Guide), if any
2. Remarks (Internal Guide), if any

Mr. Anish Mathur

Team Manager

**Company Name:** - MSBC Solutions India Pvt Ltd

**Address:** - 301, Ballashwar Square Building, Opp. Reliance Mall, Iscon Cross Road, SG Highway, Ahmedabad.

**Company Profile:-**

MSBC group has level 3 of the CMMI Institute’s Capability Maturity Model Integration (CMMI)

The group has grown significantly since its start in 2002. Innovative and novel solutions have been developed for leading international studies in biomedical research, in Europe and Middle East, finance and trading based brokers and manufacturing and logistics solutions for leading suppliers in UK.

MSBC Group has entered into strategic partnership with Orgadata AG, Leaders in Fenestration software. MSBC group has appointed as strategic sales & support partner for India profile systems and user client base.

As an Enterprise System Development Company, MSBC Group have developed novel and innovative technology platforms, together with a suite of software tools to build clients their very own customized Enterprise System Development solution; unique to their business and industry.

MSBC Group is privately owned and therefore not driven by short term targets of the market. They are able to work in strategic partnership with our clients and develop a long term approach with detailed plans. Our Directors are based in London and India; taking active role in the strategic, financial and day to day operations management of the Group.

These fall into three broad sectors:

Biomedical Research & Health

Finance

Manufacturing & Logistics

**Project:-**

**Project Guide**

**Name:** - Anish Mathur

**Qualification:** - MCA

**Experience:** - 8 Yr. + Level O, Level A, Level B

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**Project Title:-**

Face Recognition System

**Executive Summary**

**Overview: -**

A facial recognition system is a technology capable of identifying or verifying a person from a digital image or a video frame from a video source. There are multiple methods in which facial recognition systems work, but in general, they work by comparing selected facial features from given image with faces within a database. It is also described as a Biometric Artificial Intelligence based application that can uniquely identify a person by analyzing patterns based on the person's facial textures and shape.

While initially a form of computer application, it has seen wider uses in recent times on mobile platforms and in other forms of technology, such as robotics. It is typically used as access control in security systems and can be compared to other biometrics such as fingerprint or eye iris recognition systems. Although the accuracy of facial recognition system as a biometric technology is lower than iris recognition and fingerprint recognition, it is widely adopted due to its contactless and non-invasive process. Recently, it has also become popular as a commercial identification and marketing tool. Other applications include advanced human-computer interaction, video. Surveillance, automatic indexing of images, and video database, among others.

There are many advantages associated with facial recognition. Compared to other biometric techniques, facial recognition is of a non-contact nature. Face images can be captured from a distance and can be analyzed without ever requiring any interaction with the user/person. As a result, no user can successfully imitate another person. Facial recognition can serve as an excellent security measure for time tracking and attendance. Facial recognition is also cheap technology as there is less processing involved, like in other biometric techniques.

All identification technology operate using the following four stages:

**Capture:** A physical or behavioral sample is captured by the system during Enrollment and also in identification or verification process.

**Extraction:** unique data is extracted from the sample and a template is created.

**Comparison**: the template is then compared with a new sample.

**Match/non-match:** the system decides if the features extracted from the new Samples are a match or not match

**Main Functionality:**

**Fast face processing**. Our face recognition system performs fast and accurate detection of face from the image or Video.

**Face image quality determination**. A quality threshold can be used during face enrolment to ensure that only the best quality face template will be stored into database

**Identification capability.** Our system functions can be used in 1-to-1 matching (verification), as well as 1-to-many mode (identification)

**Detection from Image or Video**: System can be identified the image based on persons available in the image.

**Identifying Person Perfectly:** Our system will identify the person from the image perfectly as available the datasets.

**Tools and Technology:** Python, Flat Database