

# **Internship Report On Security System**

**BY**

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This Report Presented in Partial Fulfillment of the Requirements for the  
Degree of Bachelor of Science in Computer Science and Engineering

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
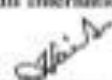
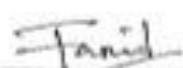


**DAFFODIL INTERNATIONAL UNIVERSITY  
DHAKA, BANGLADESH  
MAY 2019**

### **APPROVAL**

This Internship titled **Security System**, submitted by **Md. Mohaiminul Haque**, ID No: 151-15-5012 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 04-05-2019.

### **BOARD OF EXAMINERS**

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## DECLARATION

We hereby declare that, the work presented in the internship report title "Security System" is done by me Md. Mohaiminul Haque, ID No: 151-15-5012 to the department of Computer Science and Engineering, Daffodil International University. Under the supervision of **Zakia Zaman, Lecturer, Department of CSE, Daffodil International University**. I am declaring this report is my original work. I also declare that neither this internship report nor any part of this internship report has been submitted elsewhere for award of any Degree or Diploma.

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I really grateful and want our profound our obligation to Zakia Zaman, Lecturer, Department of Computer Science and Engineering, daffodil International University, Dhaka. Deep information and keen interest of my supervisor within the field of Face Recognition works application style and Development influenced me to hold out this spot. Her endless patience, studious steering, continual encouragement, constant and energetic oversight, constructive criticism, valuable recommendation, reading several inferior drafts and correcting them the least bit stage have created it attainable to finish this spot.

I would wish to specific my heartiest feeling to Dr. Syed Akhter Hossain, Professor and Head, Department of Computer Science and Engineering, for his kind facilitate to end my internship and conjointly to alternative faculty member and therefore the employees of Computer Science and engineering department of daffodil International University.

I would wish to impart my all course mates in daffodil International University, who took half during this discuss whereas finishing the course work.

Finally, I'd wish to give thanks my family particularly my oldsters for their continuous supports and encouragements throughout the entire amount of this internship.

## **ABSTRACT**

Identifying an individual with a picture has been popularized through the mass media and in scientific research. However, it is less sturdy to fingerprint or membrane scanning. This report describes the face detection and recognition mini-project undertaken for the seeing and autonomy module at Creative IT Limited. It reports the technologies out there within the Open-Computer-Vision (OpenCV) library and methodology to implement them mistreatment Python. For face detection, Haar-Cascades were used and for face recognition OpenCV, Cascade classifiers and native binary pattern histograms were used. The methodology is delineating together with flow charts for every stage of the system. Next, the results are shown together with plots and screen-shots followed by a discussion of encountered challenges.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Internship is thought on gain some experiences from the various several organizations which will facilitate plenty to create a relation between the theoretical & sensible information. It adds valuable expertise like operative workplace or pc instrumentation, handling a spread of things at the same time, organizing or analyzing knowledge, budgets or rising cooperation, writing, and speaking talents. operative workplace or pc instrumentation, writing, and speaking talents. it's vital to grasp the way to communicate information to strangers, supervisors, and peers. A student of computer science & engineering (CSE) of daffodil International University, I've got studied several programing courses Last 3.5 years. however, this is often not comfortable to grasp the pc Programming as a result of it's a really massive space of the electronic equipment technology. to urge a sound information concerning programing which has net application style & Development. I'm interested to try and do internship in CREATIVE IT SOFT.

In this internship Report is on Face Recognition for security CREATIVE IT SOFT. This internship report covers the entire internship time that I've got done with success concerning the coding, style and development.

### 1.2 Motivation

For internship to induce the sensible expertise within the field of technology and Engineering. it's greatly necessary that knowing of theoretical data and implement within the sensible field to extend our skilled expertise in engineering job market. Following all rules and regulation of the corporate in my intern amount it facilitate to create me skilled. For this reason, I select internship for my future vocation. internship talent facilitates me face to challenge in present job market.

I found that CREATIVE IT SOFT has a superb name for client satisfaction & services. CREATIVE IT SOFT is well-known in python primarily based application and conjointly web-based application style & development in Asian country. It conjointly supports IT managed service. Believe that this internship can offer me the best chance to increase my professional experiences.

### **1.3 Internship Objectives**

My objective is to perceive basic idea and structure of Python based mostly works. From internship one has to learn to produce awareness of the variability of job opportunities. It helps to look at social and structure dynamics. From internship tasks, one can learn official surroundings and the opportunities for technical ability. For improve communication ability, internship working is more helpful. If anyone wants to be professional, they can make their minds to get an internship and Knowing all variety of official data.

## 1.4 Internship Goals

Knowing sensible data concerning programming.

Gain information regarding Python, Jet Brains, Virtual environment, machine learning, C, Ajax, PHP etc.

Increase communication ability with others.

Gain essential background.

Working properly with others.

Develop analysis skills.

Improve body ability.

Increase the potential for determination the issues.

information of skilled journals and newsletters.

information of key skilled.

Improve skilled ethics and values.

Improve technical ability.

## 1.5 Introduction to the Company

CREATIVE IT SOFT technology resolution supplier primarily based in Dhaka, Bangladesh. They been around since 2014. Growing once a year. It conjointly transformative power of technology to supply inventive solutions to your business challenges. CREATIVE IT SOFT may be a non-public company incorporated underneath the businesses Act, 1994. It provides one stop-automated resolution for your trade and business. betting on the dimensions and field of partners, it's completely different product and services to satisfy their necessities. CREATIVE IT SOFT provides the optimum and customized solutions created for any organization. With cluster of specialists' CREATIVE IT SOFT provides inexperienced resolution that facilitate consumer atmosphere to utilize it on a most scale.

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CREATIVE IT SOFT also provides services as

- custom-built answer development
- IT Managed Services
- Sales observation with real time synchronize.
- Systems integration
- Hosted center service
- Analytics, news and large information solutions
- worth added Service style Implementation

## **1.6 Report Layout**

The layout of my report is sorted by chapter 1: Internship Introduction, Motivation, Internship objective and about the company. Chapter 2: Introduction, SWOT Analysis, Organizational Structure. Chapter 3: Face recognition, collecting information about face recognition, Running the code in code generator, Real time analysis for identification, Coding and Setting up necessary library files. Chapter 4: Competencies Earned, Smart plan, Reflection, problem and Solution Learning. Chapter 5: Conclusion and future scopes of the internship.

## **CHAPTER 2 ORGANIZATION**

### **2.1 Introduction**

This chapter lined the methodology of post program and provides the data regarding Where the post has been hooked up to assume responsibility this program.

### **2.2 Internship program overview**

I have been undertaking this internship program in CREATIVE IT SOFT, 75(Beside BRB Hospital, Panthopath), East Raja Bazar, Dhaka, Bangladesh from 25<sup>th</sup> November to 25<sup>th</sup> March

Supervised by **Md. Ibrahim Shopon, Chief Executive Officer**

### **2.3 Target Group**

Changing apace the planet, each organization, establishment and company has to develop competency in computers and technology so as to stay competitive and no-hit. IT infrastructure with digital service facilities should for all workplace section and skills must for all skilled, altogether sector of business, business and services. To top off those demands CREATIVE IT SOFT is advancing with correct initiatives. Our vision statement ought to be associate degree audacious dream of a future reality supported the work what I do. The vision of CREATIVE IT SOFT is delivering happiness to customers, employees. The render of code farm services to each one for the sake of humanity and to make a better World.

### **2.4 SWOT Analysis**

SWOT stands with Strengths, Weaknesses, Opportunities and Threats. SWOT analysis aims to spot the key internal and external all factors seen as necessary to achieving an Objective.

#### **2.4.1 Strengths:**

Characteristics to the business that place the business or project at advantage or disadvantages relative to others. it's the inner factors among organization.

- CREATIVE IT SOFT may be a technology resolution supplier primarily based in Dhaka, Bangladesh that has virtually a few years of expertise in IT field of Bangladesh. CREATIVE IT SOFT started their journey by introducing its services like: IT management, client answer, Telecom, computer code and total IT answer
- CREATIVE IT SOFT has totally different stories with alternative company. it's well-trying expertise with plenty of project, world service delivery through certified IT division, commitment to quality and it conjointly has collaboration and suppleness and also has a thousandth consumer satisfaction with dedicated post support.
- Exceptionality: it's several skilled platforms, offer reliable, accountable, qualities answer. Speedy project implementation.

#### **2.4.2 Weakness**

- Many persons several minds: generally, totally different ideas return from many persons and make drawback. during this company this is often encourage to use new strategy for higher performance.

Sometimes it's created drawback as a result of workers are accustomed with previous strategy.

- Complicated Structure: CREATIVE IT SOFT has plenty of services. These services and their billings policies are totally different that conjointly tough for a user to grasp.
- Lack of Harmony: Intercommunication among varied departments is a few weak. the explanation behind this, there are not any exchange program for workers to figure among varied Strategic Business Units.

#### **2.4.3 Opportunities**

CREATIVE IT SOFT is associate degree IT company in Bangladesh provides several computer code resolution development solutions. The key of our company includes maintaining and also the leading computer code resolution provides, guarantee good thing about our client, shareholders and company and exploiting the outstanding expertise and information of all form of individuals and developing ability in method development and project management.

Sometimes if you desire share some similar values and have the eagerness for a bounty career in line with our zoom then perhaps, we have a tendency to be the correct organization to figure along towards

optimize excellence. creative IT SOFT is an equal opportunity leader providing market commonplace worker profit and friendly operating setting.

For our international shopper tale, there are ample chance for international exposure and growth worker rotations, training, and work attachments. All variety of vacancies are consummated on the idea of the power, qualification and every one variety of expertise.

#### **2.4.4 Threats**

We all noticed, solely some IT connected corporations dominated individual countries. Most developed and developing countries the most variety of Telkom is 2-4 because it is incredibly laborious to contend with different corporations who already planted their foundation within the business.



## 2.5 Organizational Structure

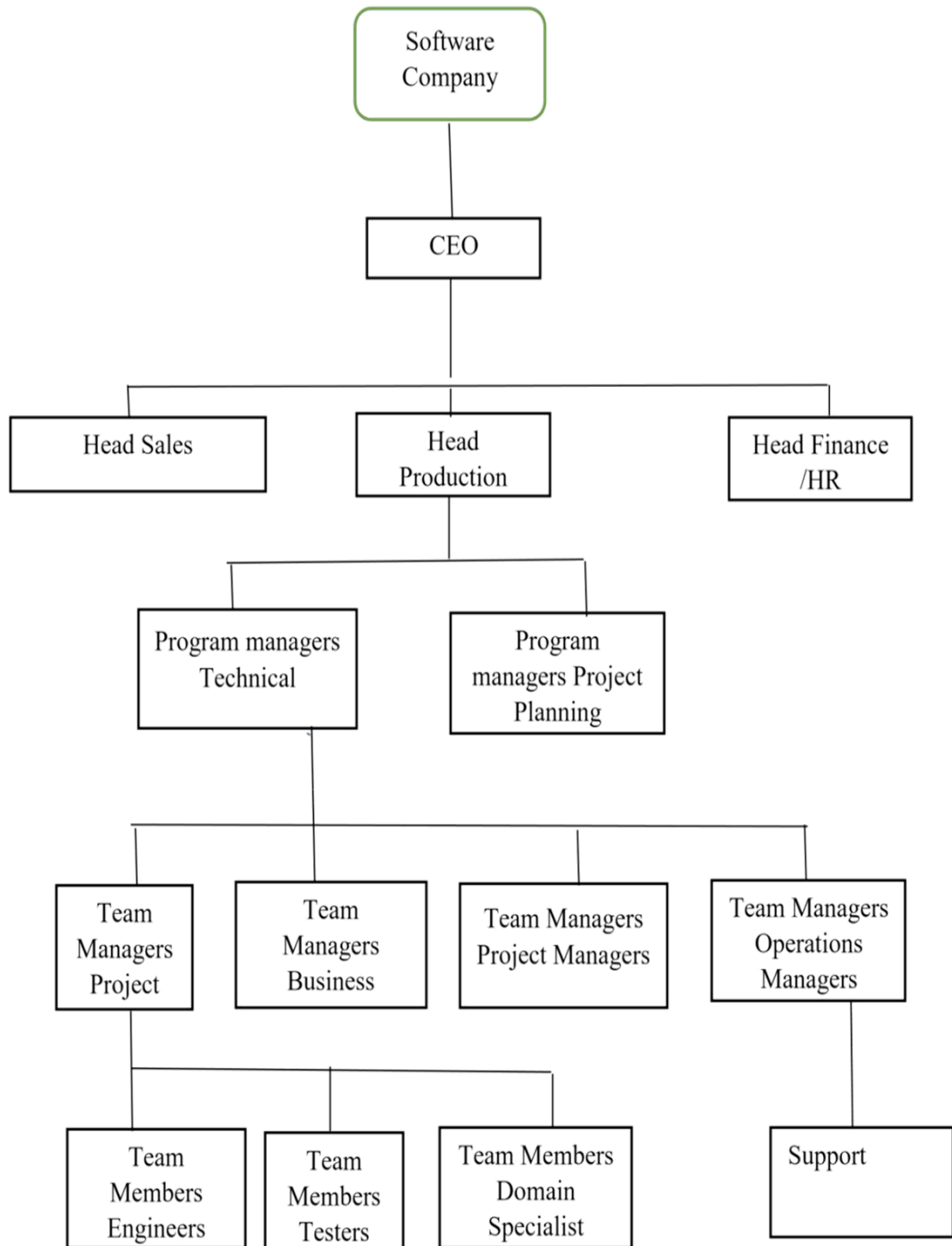


Figure 2.5.1: Organizational Structure of CREATIVE IT SOFT

## **CHAPTER 3**

### **TASKS, PROJECT AND ACTIVITIES**

#### **3.1 Daily Task and Activities**

- Making an idea for recognizing related application.
- Backing up all the data.
- Designing, implementing the code.
- Facing challenges on coding
- Solving the problems with proper measures.

#### **3.2 Events and Activities**

In this time allotted tasks and activities. Throughout my internship time, I long-faced some drawback that occurred by virtual environments and interpreters. The project is about security system by face recognition. I had to learn about Python language to intercept the coding. I had to learn about the environments to implement. Within the internship time I contributed on a portion for face detecting on this real time project and worked with them. currently I am discussing a few real time projects with the IT farm.

##### **3.2.1 Face recognition**

The problem of face recognition in a very general scenario (arbitrary create, lighting and facial expression) may be a very troublesome drawback. during this project we've got with success investigated a verity of various approaches for achieving our goals in face recognition. we've got developed a face recognition system that investigate completely different aspects of our project goals

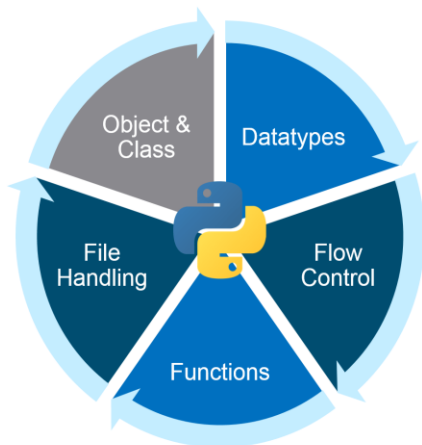
- Collecting information about face recognition.
- Running the code on the code generator
- Real time analysis for identification

### 3.2.2 Collecting information about face recognition

facial recognition system is a technology capable of distinguishing or validating someone from a digital image or a video frame from a video supply. There are multiple ways within which face recognition systems work, however generally, they work by comparison hand-picked countenance from given image with faces among a database.

For creating a face recognition system, I worked with the python language. It was instructed by our team leader to operate with python. Therefore, he taught us about python. I was instructed by him to build a recognition part of the total project. The complete project is to make a security system by recognizing particular people to avoid trespassing and breaking in. For that I had to learn few things as in:

- Python Language
- Virtual environments (Pycharm, anaconda etc)
- Various types of library files
- Attributes
- Classifiers



FUNDAMENTALS				
Datatypes	Flow Control	Functions	File Handling	Object & Class
Numbers Strings Lists Dictionaries	If Else For While Continue	Definition Function Call Docstring Return	Reading Writing Editing	Variables Functions

Figure 3.2.2 Collecting information about Python

### 3.2.3 Running the code on the code generator

I used Python 3.7 version as instruction to implement the codes. I also used virtual environment Pycharm to develop my task. To do that, I had to generate the codes by researching from various tutorials given by the team leader of our project.

```
1 import cv2
2 import numpy as np
3
4 face_cascade = cv2.CascadeClassifier('haarcascade_frontalface_default.xml')
5 eye_cascade = cv2.CascadeClassifier('haarcascade_eye.xml')
6 cap = cv2.VideoCapture(0)
7
8 while True:
9     ret, img = cap.read()
10    gray = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)
11    faces = face_cascade.detectMultiScale(gray)
12    for(x, y, w, h) in faces:
13        cv2.rectangle(img, (x,y), (x+w, y+h), (0,0,255), 4)
14        roi_gray = gray[y:y+h, x:x+w]
15        roi_color = img[y:y+h, x:x+w]
16        eyes = eye_cascade.detectMultiScale(roi_gray)
17        for(ex, ey, ew, eh) in eyes:
18            cv2.rectangle(roi_color, (ex, ey), (ex+ew, ey+eh), (0, 255, 0), 2)
19    cv2.imshow('image', img)
20    if cv2.waitKey(1) & 0xFF == ord('q'):
21        break
22    cap.release()
23    cv2.destroyAllWindows()
24
25
```

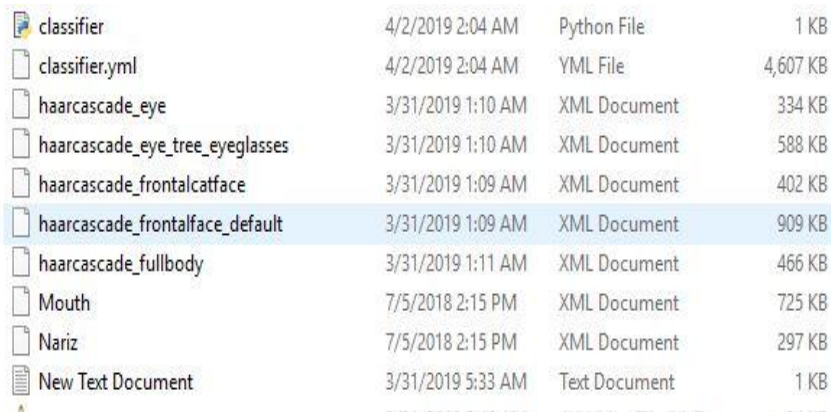
Figure 3.2.3: Running the code on the code generator

### 3.2.4 Real time analysis for identification

In real time analysis for identification I had to implement the data set for faces. I worked with single dataset to test the recognition task. I tested it with my own face data.

The code I implemented, made an output that recognizes my face firstly without an ID or name.

I had to implement some cascade classifiers named as Haar cascade classifiers for the facial recognition. Haar cascade files are made for various types of body parts and object recognizing library type files that can be implemented via OpenCV (Open Source Computer Vision library). OpenCV can classify the cascade files with some libraries and Python IDLE or virtual environment.



File Name	Modified	Type	Size
classifier	4/2/2019 2:04 AM	Python File	1 KB
classifier.yml	4/2/2019 2:04 AM	YML File	4,607 KB
haarcascade_eye	3/31/2019 1:10 AM	XML Document	334 KB
haarcascade_eye_tree_eyeglasses	3/31/2019 1:10 AM	XML Document	588 KB
haarcascade_frontalcatface	3/31/2019 1:09 AM	XML Document	402 KB
haarcascade_frontalface_default	3/31/2019 1:09 AM	XML Document	909 KB
haarcascade_fullbody	3/31/2019 1:11 AM	XML Document	466 KB
Mouth	7/5/2018 2:15 PM	XML Document	725 KB
Nariz	7/5/2018 2:15 PM	XML Document	297 KB
New Text Document	3/31/2019 5:33 AM	Text Document	1 KB

Figure 3.2.4: Haar Cascade Classifiers

### 3.3 Project Task and Activities

Here I am going to describe the project part which name is “Security System”.

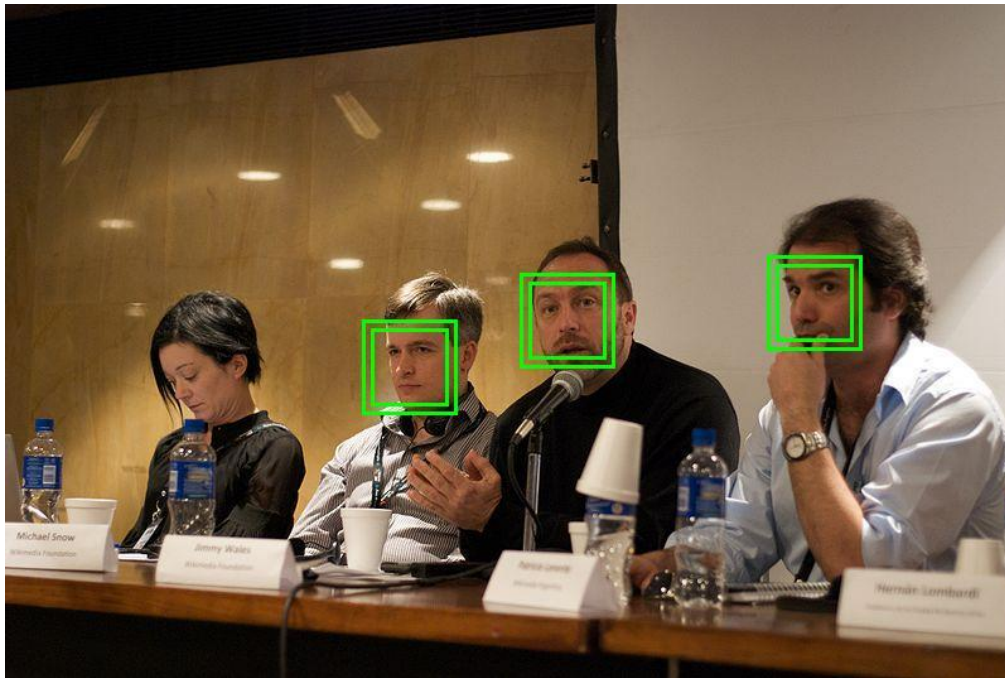


Figure 3.3: Face recognition

#### 3.3.1 Coding part

- Developing python codes for the project elements
- Installing the proper version IDLE for python
- Using Pycharm as virtual environment
- Implementing the necessary codes generated by me.

### 3.3.2 Setting up Necessary library files

- In virtual environment (Pycharm) I needed to install the necessary libraries.
- Numpy, Opencv, Opencv-contrib-python, Matplotlib etc were used for primary libraries.
- Pillow, Time, Os are also among the necessary libraries.

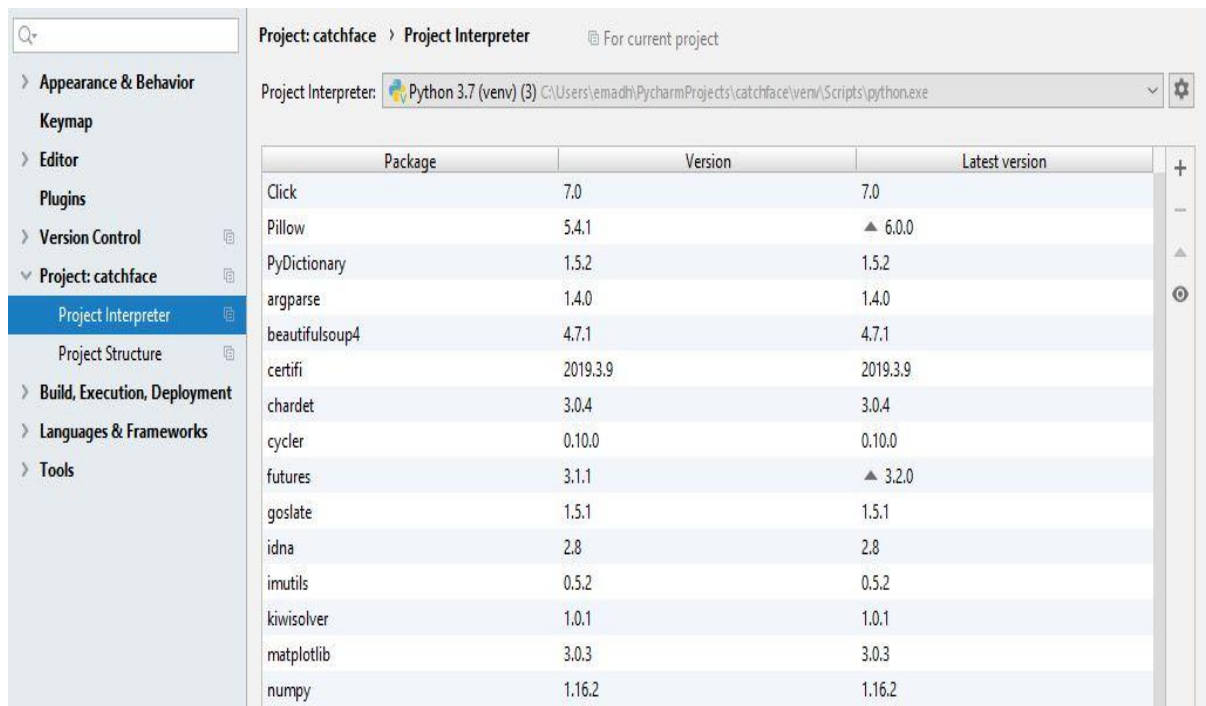


Figure 3.3.2: Setting up necessary libraries

### 3.3.3 Calling the Classifiers

Haar cascade classifiers were used as the classifiers and algorithm for this task. The cascade files are basically working to recognize a certain body parts, or object or number. Therefore I have used haar cascade frontalface classifier to develop the recognition part.

It can be generated to recognize the eyes, nose, smile by the cascades but I was instructed to make a facial recognition part only. So I didn't use the other classifiers.

```
faceCascade = cv2.CascadeClassifier("haarcascade_frontalface_default.xml")
```

Figure 3.3.3: Calling the classifiers

### 3.3.4 Face recognition process

For this project 2 algorithms are enforced severally haar cascade, classifiers severally. All 2 is enforced using OpenCV libraries.

There are 3 stages for the face recognition as follows:

- grouping pictures IDs
- Extracting distinctive options, classifying them and storing in XML files
- Matching options of associate degree input image to the features within the saved XML files and predict identity



### 3.3.5 Training the classifiers

Training the Classifiers OpenCV permits the creation of XML files to store options extracted from datasets victimization the Face Recognizer category. The hold on pictures are foreign, regenerate to grayscale and saved with IDs in 2 lists with same indexes. Face Recognizer objects are created victimization face recognizer category.



```
13 for image in path:
14     img = Image.open(image).convert('L')
15     imageIq = np.array(img, 'uint8')
16     id = int(os.path.split(image)[1].split(".")[1])
17
18     faces.append(imageIq)
19     ids.append(id)
20
21     ids = np.array(ids)
22
23     clf = cv2.face.LBPHFaceRecognizer_create()
24     clf.train(faces, ids)
25     clf.write("classifier.xml")
26
27
28 train_classifier("data")
```

Figure 3.3.5: Training the classifiers

### 3.3.6 Problem faced to create cv2.face.createFisherfaceRecognizer()

The primary argument is that the range of parts for the face attribute..

OpenCV mentions it to be unbroken zero if unsure.

cv2.face.createLBPHFaceRecognizer()

1. The radius from the center element to make the native binary pattern.
2. the quantity of sample points to make the pattern. Having a substantial range can impede the pc.
3. the quantity of Cells to be created in X axis.
4. the quantity of cells to be created in Y axis.
5. After installing pydictionary the problem was solved to create this attribute

```
48 clf = cv2.face.LBPHFaceRecognizer_create()
```

Figure 3.3.6: cv2.face.createLBPHFaceRecognizer()

### 3.3.7 Recognizing the face

After all the efforts I have taken by the instruction of my team leader and following many tutorials the code generated the recognition system and recognizes my face as I have used my face as the dataset. If I put more faces as dataset, it will recognize the faces. It loads the data from the folder that saved my face as dataset and trained the machine to recognize the person. Using ID or Name can be used as the recognizer tool. I have used Name here to recognize. The data loads from the classifier.yml file. It's a dataset which is created to get trained to identify my face.

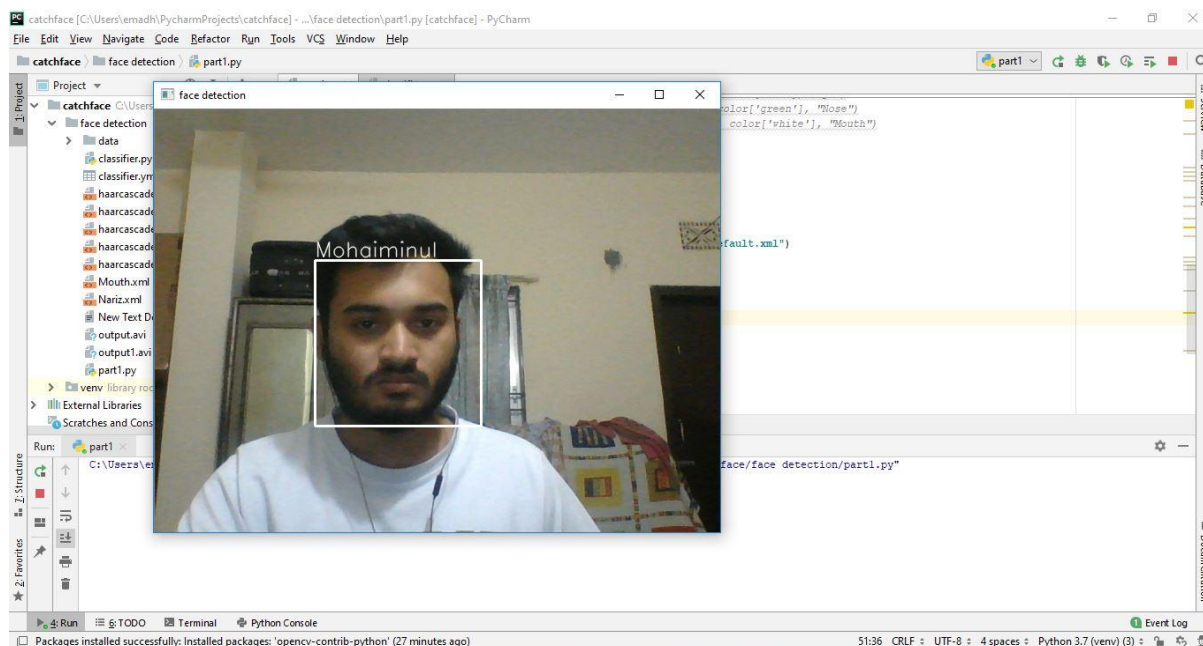


Figure 3.3.7 Recognizing the face

### 3.4 Challenges

We know though the officers are thus busy however they gave me well hearted cooperation within the time of my position. once whereas grouping knowledge I had restricted access to some data for confidentially purpose. I've got spent enough time for learning the sort of job appointed to me additionally scope us to newer variety of skilled work surroundings with new individuals and dealing really the telecommunication sector is incredibly a lot of sensitive. I have faced lot of challenges in this project work. It was difficult for me at the primary time. But by the time being, I managed to cope up with the difficulties and got solution by proper instructions from my team leader. The big problem was to set up a dataset and creating the fac recognizer attribute. At the very end I solved the problems with more research and help of tutorials and my team leader. Thus, I completed my task to make the recognition part of the whole project.

## **CHAPTER 4**

### **COMPETENCIES AND SMART PLAN**

#### **4.1 Competencies Earned**

We have been facing several challenges each and every day. The IT trade is evolving with this challenge. During the time of office period of I learned several net style and development talent and conjointly code development. The subsequent list of procedure and documents give an honest define for an online application style and development process:

- All form of training attend for increasing ability, gain information, and improve performance.
- Many varieties of software system maintenance.
- Team collaboration.
- Potential unity.
- Balance between career and dealing time.
- Open communication with all staff.
- Operating with the event groups.

## 4.2 Smart Plan

I might decision myself a computer engineer, while I will jump into a system analyst. I might never claim to be a hardcore high-end computer engineer. As a computer engineer a learning numerous kind language like

- HTML
- Bootstrap
- CSS
- JavaScript
- Basic PHP
- Time and Date Function
- Forms
- File operating

My internship time I gather sensible information which will facilitate my future career. I finished some project among a team. currently I making an attempt to extend a lot of information and follow more and more. My future arranges concerning knowing computer engineering and implement it within the real world.

## 4.3 Reflections

Being an intern student to urge the sensible expertise within the field of engineering. It becomes to extend the expertise in engineering job. during this position time I learned concerning the tools that are design to use to design an internet application like hypertext mark-up language, Python based works, Security systems, CSS, BOOTSTRAP framework, JavaScript etc. This expertise facilitates me to be a robust individual in job market. Intern facilitate me to supply analysis and branch marking in internet application. It conjointly facilitates advance tricks and visits that are practiced by the skilled. I work with several project currently I'm know the way to manage internet application project and how to beat any form of essential scenario. Finally obtaining the expertise to figure on skilled team.

## **CHAPTER 5 CONCLUSION AND FUTURE CAREER**

### **5.1 Discussion and Conclusion**

Bangladesh is a developing country and the ICT sector is getting developed day by day. The govt of Bangladesh has taken some necessary project to develop the knowledge and Technology sector of our country. It's the construct for forward "Digital Bangladesh". Connected of Computer Science topics will get easy after you study from solely book however after we exposed to achieve sensible information then it helps to robust knowledge and provides us assured regarding our understanding. I gather lots of expertise and this is often an excellent chance on behalf of me to complete this post on "Face Recognition for Security" at CREATIVE IT SOFT. throughout this post, if I don't get probability to require internship, I can't reach that kind of real information. it absolutely was nice chance on behalf of me to attend internship and increase my carrier space. My internship company offers me an honest scope to be told. I'm very grateful to them. currently I'm ready to develop internet application. It offers me the possibility to fulfill the important life software system development atmosphere.

## 5.2 Scope for Future Career

Internship goals provide a very good clear concept about practical and semantic web base system. My internship implemented a proof of concept for a decision-making system using imitated knowledge. If I don't have any experience in real project. Finding any work can be a real challenge. A successful internship can help me turn an experience into a career opportunity. Now a days on the scope of Web application Design & Development the course is excellent and has tremendous scope. So, as a successful internship my future scopes will be:

- To work with IT based company.
- Data Collection works
- Possibly can work as a Web Developer
- Possibly can work as a software tester

## REFERENCE

- [1] CREATIVE IT SOFT << [info@creativeitsoft.net](mailto:info@creativeitsoft.net) >> [last visited march 02,2019 01.00 pm]
- [2] Google <<<https://www.google.com/>>> [last visited march 02,2019 02.00 pm]
- [3] Wikipedia <<<https://www.wikipedia.org/>>> [last visited march 01,2019 03.00 pm]



## APPENDICES

### Introduction

Internship is to find out and perceive the real world activity, applications and implementation of the theories of the study. this can be a scope to figure for the scholars provided by the university and also the corporations before getting into the job market to grasp the real-world operating surroundings. this can be a true chance for students to correct themselves for the long run operating life.

### Learning throughout spot

I have learned these things that are mentioned below throughout the spot within the creative IT SOFT.

### Discipline

From this internship I've got learned discipline that is extremely abundant vital. I've got learned the way to be disciplined within the company surroundings. however, the operating time and workplace ought to be followed and maintained I learned from spot. it's vital I did satisfy the discipline conjointly.

### Team Work

Team work is extremely abundant vital for any style of work. No better service may be provided while not a higher team work. a higher synchronization it's conjointly a interest understand how to grasp team members and how to follow them for the most effective synchronization of labor.

## **Understanding Responsibilities**

All types of job come with responsibilities which has to be happy. Face any sure scenario and manage it using ability. Senior team members created me perceive those and support me to satisfy the responsibilities of the task at scenario. I've got learned several things from my superiors.

## **To be skilled**

Have a higher service it's required to own perfection within the work. And it's not possible to own perfection within the job while not skilled and correct operating perspective. it had been completely tutored by the senior member of the team.

## **APPENDIX A: INTERNSHIP REFLECTION**

- [1]. OpenCV- Open Source Computer Vision.
- [2]. Cascades- Classifiers for face recognition tools
- [3]. LIB- Library Files for running the python codes in IDLE
- [4]. IDLE- integrated development environment for Python

## APPENDIX B

### COMPANY DETAIL

CREATIVE IT SOFT technology solution supplier based mostly in Dhaka, Bangladesh. They been around since 2014. Growing per annum. It conjointly transformative power of technology to produce inventive solutions to your business challenges. inventive IT SOFT is a personal company incorporated beneath the businesses Act, 1994. It provides one stop-automated answer for your trade and trade. betting on the dimensions and field of partners, it's totally different merchandise and services to fulfill their necessities. CREATIVE IT SOFT provides the optimum and customized solutions created for any organization. With cluster of experts' CREATIVE IT SOFT provides inexperienced answer that facilitate consumer setting to utilize it on a most scale

#### **Company Profile (Head Office):**

Name: CREATIVE IT SOFT

75(Beside BRB Hospital, Panthopath 75(Beside BRB Hospital, Panthopath), East Raja Bazar, Dhaka, Bangladeshth), East Raja Bazar, Dhaka, Bangladesh

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# Face Recognition

*by* Muhaiminul Islam

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**Submission date:** 16-Apr-2019 02:46PM (UTC+0600)

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**File name:** muhiminul\_new.docx (739.33K)

**Word count:** 3793

**Character count:** 21106

## Face Recognition

### ORIGINALITY REPORT

<b>12%</b>	%	%	<b>12%</b>
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

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