

# ACKNOWLEDGEMENT

First and the foremost, we thank **ALMIGHTY GOD** who gave us the inner strength, resource and ability to complete our work successfully, without which all our efforts would have been in vain.

We express our sincere gratitude to the principal, **Dr. P. SOJAN LAL** for providing us the provision to do the project in the successful way.

We stand grateful to **Asst. Prof. Midhun Mathew**, Head of the Department of Computer Science and Engineering, for his whole hearted support.

We express our sincere gratitude to our project co-ordinator, **Asst. Prof. Mintu Thomas** for her whole-hearted support.

We extend our heartfelt gratitude to our project guide, **Asst. Prof. Mahesh K M** for his guidance and encouragement which where indispensable for the fulfilment of this project presentation.

We use this opportunity to thank all faculties in the department and the friends who have helped us to complete the project, with their inspiration and co-operation. Last but not the least we are thankful to our parents without their prayers and blessings our project presentation would not have been a success.

# **ABSTRACT**

The main purpose of the proposed system is to build a face recognition-based attendance monitoring machine for educational institution to enhance and upgrade the current attendance system into more efficient and effective as compared to before. The technology working behind will be the face recognition system. The human face is one of the natural traits that can uniquely identify an individual. Therefore, it is used to trace identity as the possibilities for a face to deviate or being duplicated is low. Face databases will be created to pump data into the recognizer algorithm. Then, during the attendance taking session, faces will be compared with the database to seek for identity. When an individual is identified, his or her individual's identification count is updated. Based on the identification count and time period the duty time is verified. The identification count is used to track Coming In and Coming Out of individuals. An Admin is in control of all the database for face structures and attendance where he can modify attendance and control the face data structures. All the attendance details are available for the users through a portal and they can track the activities through this portal. Also, a remark is also generated which is an add-on to our project, where the mood of each individual is analyzed based on the facial data.

# CONTENTS

<b>ACKNOWLEDGEMENT</b>	i
<b>ABSTRACT</b>	ii
<b>LIST OF FIGURES</b>	v
<b>ABBREVIATION</b>	vi
<b>CHAPTER 1: INTRODUCTION</b>	
<b>1.1: General Background</b>	1
<b>CHAPTER 2: LITERATURE SURVEY</b>	
<b>2.1: Related Works</b>	
<b>2.1.1: Automated attendance system using ML approach</b>	2
<b>2.1.2: Automated attendance system using face recognition by k-means algorithm</b>	2
<b>2.1.3: Attendance monitoring using CCTV</b>	3
<b>2.1.4: Smart Attendance Monitoring System (SAMS): A Face Recognition based Attendance System for Classroom Environment</b>	3
<b>2.1.5: IAAS: IoT-Based Automatic Attendance System with Photo Face Recognition in Smart Campus</b>	3
<b>2.1.6: Design of intelligent attendance system based on face recognition</b>	4
<b>2.1.7: Research and development of attendance management system based on face recognition and RF id technology</b>	4
<b>2.1.8: IoT based smart attendance monitoring system using RF id</b>	5
<b>2.1.9: Facial expression (mood) recognition from facial images using committee neural networks</b>	5
<b>2.1.10: Personalized emotion recognition and emotion prediction system based on cloud computing</b>	6

# CONTENTS

<b>CHAPTER 3: DESIGN</b>	
<b>3.1: Block Diagram</b>	7
<b>3.2: DFD</b>	
<b>3.2.1: 0 – Level DFD</b>	8
<b>3.2.2: 1 – Level DFD</b>	9
<b>3.2.3: 2 – Level DFD</b>	10
<b>CHAPTER 4: IMPLIMENTATION DETAILS</b>	
<b>4.1: Platform- Anaconda</b>	11
<b>4.2: Ide- Jupyter</b>	11
<b>4.3: Python</b>	11
<b>CHAPTER 5: WORK PLAN</b>	13
<b>CHAPTER 6: DATABASE</b>	14
<b>CHAPTER 7: PAGE DESIGN</b>	15
<b>CHAPTER 8: SCREENSHOTS</b>	16
<b>CHAPTER 9: CONCLUSION</b>	18
<b>CHAPTER 10: REFERENCE</b>	19
<b>APPENDIX</b>	20

# LIST OF FIGURES

<u>No.</u>	<u>Title</u>	<u>Page No.</u>
3.1	Block Diagram	7
3.2	0-Level DFD	8
3.3	1-Level DFD	9
3.4	2-Level DFD	10

# **ABBREVIATION**

ML	MACHINE LEARNING
CNN	CONVOLUTIONAL NEURAL NETWORKS
MySQL	MY STRUCTURED QUERY LANGUAGE
SQL	STRUCTURED QUERY LANGUAGE
IDE	INTEGRATED DEVELOPMENT ENVIRONMENT