**Zeal Education Society’s** 

**Zeal college of Engineering and Research**

**Narhe| Pune| India**

**(Affiliated to Savitribai Phule Pune University, Pune)**

**-----------------------------------------------------------------------------------------------**



PROJECT WORK BOOK

For

Academic year 2020 - 2021

Project Phase-I

----------------------------------------------------

Department of Information Technology

**Zeal Education Society’s**

**Zeal college of Engineering and Research**

**Narhe| Pune| India**

**Department of Information Technology**

Final Year Project Work

Semester-I

Academic Year: **<<2020-2021>>**

|  |  |  |
| --- | --- | --- |
| Project Title | : | Student Attendance System Via Face Recognition using Python |
| Project Area | : | Python, CNN |
| Internal Guide | : | Prof. Supriya Patil |



**Savitribai Phule Pune University**

**Zeal Education Society’s**

**Zeal college of Engineering and Research, Pune-41**

**(Affiliated to Savitribai Phule Pune University, Pune)**

**Department of Information Technology**

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**(Affiliated to Savitribai Phule Pune University, Pune)**

Project Work Book

Academic Year: 2020 - 2021

Department: IT



Group/Project ID: 31



Team Members:

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Roll No. | Name of the student | Signature |
| 1 | BEA350 | Akshay Balasaheb Jadhav |  |
| 2 | BEB460 | Atharva Prashant Tillu |  |
| 3 | BEA308 | Shubham Prabhakar Bankar |  |
| 4 | BEA330 | Mayur Atul Dawande |  |

Project Title: Student Attendance System Via Face Recognition using Python

Broad Area of the Project/Abstract:

Face is the crucial part of the human body that uniquely identifies a person. Using the face characteristics as biometric, the face recognition system can be implemented. The most demanding task in any organization is attendance marking. In traditional attendance system, the students are called out by the teachers and their presence or absence is marked accordingly. However, these traditional techniques are time consuming and tedious. In this project, the Open CV based face recognition approach has been proposed. This model integrates a camera that captures an input image, an algorithm for detecting face from an input image, encoding and identifying the face, marking the attendance in a spreadsheet or a database. The training database is created by training the system with the faces of the authorized students. Here Neural Network is used for the better accuracy of the model.

Name and signature of Project Guide

**General Instructions**

* Students should enter the correct information in the work book.
* Guides should verify all entries made by the students. Students cannot make amendments without permission of the guide.
* Students should report to their respective guides as per the schedule and its log is to be maintained in the work book.
* Follow all deadlines and submit all documents strictly as per prescribed formats.
* The work book should be produced at the time of all discussions, presentations and examinations.
* The work book must be submitted to project coordinator/ guide/ department / College after successful examination at the end of year.
* All documents and reports are to be prepared in a proper format as per the guideline by department.

**Preamble**

The word *project* comes from the Latin word *projectum* from the Latin verb *proicere*, "to throw something forwards" which in turn comes from *pro-*, which denotes something that precedes the action of the next part of the word in time (paralleling the Greek πρό) and *iacere*, "to throw". The word "project" thus actually originally meant "something thatcomes before anything else happens".

(Curtsey Ref- http://en.wikipedia.org/)

The Project is conceiving the idea and implementing it systematically by using the knowledge derived in the course of education mainly to innovate or facilitate.

Work involves, study the feasibility of the project, planning project, studying existing systems, tools available to implement the project and state of art software testing procedures and technology with use of case tools.

The group of Under Graduate students at Final Year students will undertake project over the academic year. Work involves study the feasibility of the project, planning project, studying existing systems, tools available to implement the project and state of art software testing procedures and technology with use of case tools, design is to be implemented into a working model (software or hardware or both) with necessary software interface as an executable package.

**Objectives**

* To apply the knowledge for solving realistic problem
* To develop problem solving ability
* To organize, sustain and report on a substantial piece of team work over a period of several months
* To evaluate alternative approaches, and justify the use of selected tools and methods,
* To reflect upon the experience gained and lessons learned,
* To consider relevant social, ethical and legal issues,
* To find information for yourself from appropriate sources such as manuals, books, research journals and from other sources, and in turn increase analytical skills.
* To work in TEAM and learn professionalism.

**Outcome**

Students are expected to know and be able to-

* Solve real life problems by applying knowledge
* Analyze alternative approaches
* Apply and use most appropriate one for feasible solution.
* Write precise reports and technical documents in a nutshell.

**Guidelines for Selection of Project Work**

Project is one of the significant contributory team works that has to be completed with distinct impression. It is really very difficult to explore the domain of interest / research/ thirst area/ society need. In general one cannot figuratively define best project but still there are certain parameters on which we can gauge the quality of project work done. It will be better suited to go for well-defined and relatively safe projects that provide scope for demonstrating proficiency with a low risk of failure especially at Under Graduate level.

**General guidelines:**

* Identifying domain, feasibility and usability of work.
* Project work is expected to involve a combination of sound background research (thorough study/ follow a line of investigation), and methodical implementation.
* The utility of project has to be emphasized. It is also acceptable to identify the discrepancies/ flaws in the existing system and work accordingly to rectify or improve. Understanding the way project will be materialized and progressed

**University Syllabus of Project Work for Semester I**

**Savitribai Phule Pune University**

**Fourth Year of Information Technology Engineering (2015 Course)**

**414460: Project Phase-I**

**Semester- I**

**Teaching Scheme: Examination Scheme:**

**TUT:02 Hours/Week TW:50 Marks**

**Credits:02**

**Prerequisites:**

Project Based Seminar

**Course Objectives:**

1. Student should be able implement their ideas/real time industrial problem/ current applications from their engineering domain.

2. Students should be able to develop plans with help of team members to achieve the project's goals.

3. Student should be able to break work down into tasks and determine appropriate procedures.

4. Student should be able to estimate and cost the human and physical resources required, and make plans to obtain the necessary resources.

5. Student should be able allocate roles with clear lines of responsibility and accountability and learn team work ethics.

6. Student should be able to apply communication skills to effectively promote ideas, goals or products.

**Course Outcomes:**

By the end of the course, students should be able to

1. To show preparedness to study independently in chosen domain of Information Technology and programming languages and apply their acquired knowledge to variety of real time problem scenarios.

2. To function effectively as a team to accomplish a desired goal.

3. An understanding of professional, ethical, legal, security and social issues and responsibilities related to Information Technology Project.

**Contents:**

Project Based Seminar (PBS) helped students to gather, organize, summarize and interpret technical literature with the purpose of formulating a project proposal in third year. Students had also submitted a technical report summarizing state-of-the-art on an identified domain and topic in third year. B.E. Projects can be application oriented and/or will be based on some innovative/ theoretical work. In Project Phase-I the student will undertake project over the academic year, which will involve the analysis, design of a system or sub system in the area identified earlier in the field of Information Technology and Computer Science and Engineering. In some cases; if earlier identified project is not feasible; a new topic must be formulated in consultation with the guide and project coordinator. The project will be undertaken preferably by a group of 3-4 students who will jointly work and Implement the project. The group will select a project which is based on seminar delivered in relevant domain in Project based Seminar activity with approval from a committee formed by the department of senior faculty to check the feasibility and approve the topic.

**Guidelines for Students and Faculty**

* The Head of the department/Project coordinator shall constitute a review committee for project group; project guide would be one member of that committee by default.
* There shall be two reviews in Project phase –I in semester-I by the review committee.
* The Project Review committee will be responsible for evaluating the timely progress of the projects.
* As far as possible Students should finalize the same project title taken for Project Based Seminar (PBS).
* Student should Identify Project of enough complexity, which has at least 4-5 major functionalities
* Student should identify stakeholders, actors and write detail problem statement for system
* Review committee should revisit “Feasibility Review” conducted by Examiners during Oral examination in Third year in first week after commencement of the term.
* Review committee should finalize the scope of the project.
* If change in project topic is unavoidable then the students should complete the process of project approval by submitting synopsis along with the review of important papers. This new project topic should be approved by review committee.
* The students or project group shall make presentation on the progress made by them before the committee.
* The record of the remarks/suggestions of the review committee should be properly maintained and should be made available at the time of examination.
* Each student/group is required to give presentation as part of review for 10 to 15 minutes followed by a detailed discussion.
* Students should Revisit and Reassess the problem statement mentioned in the project-based seminar activity.

**Review 1: Synopsis**

Deliverables:

1. The precise problem statement/title based on literature survey and feasibility study.

2. Purpose, objectives and scope of the project.

3. List of required hardware, software or other equipment for executing the project, test environment/tools, cost and human efforts in hours.

4. System overview- proposed system and proposed outcomes.

5. Architecture and initial phase of design (DFD) .

6. Project plan 1.0.

**Review 2: SRS**

Deliverables:

1. SRS and High level design

2. Detail architecture/System design/algorithms/techniques

3. At least 30-40% coding documentation with at least 3 to 4 working modules

4. Test Results

5. Project plan 2.0

One paper should be published in reputed International conference/International journal based on project work done.

**Project report contains the details as Follows**:

Contents

List of Abbreviations

List of Figures

List of Graphs

List of Tables

1. Introduction and aims/motivation and objectives

2. Literature Survey

3. Problem Statement/definition

4. Project Requirement specification

5. Systems Proposed Architecture

6. High level design of the project (DFD/UML)

7. System implementation-code documentation-algorithm, methodologies, protocols used.

8. GUI/Working modules/Experimental Results

9. Project Plan

10. Conclusions

11. Bibliography in IEEE format

Appendices

A. Plagiarism Report of Paper and Project report from any open source tool

B. Base Paper(s)

C. Tools used

D. Papers Published/Certificate

* Use appropriate plagiarism tools, reference managers, Latex Lyx/latest Word for efficient and effective project writing.

**Term Work:**

The term work will consist of a report and presentation prepared by the student on the project allotted to them.

**Reference Books:**

1. UML2 Bible by Tom Pender, Wiley India Pvt. Limited 2011.

2. Applying UML and Patterns Second Edition by Craig Larman, Pearson Education.

3. UML 2 and the Unified Process, Second Edition, JIM Arlow, Ila Neustadt, Pearson.

4. Design Patterns: Elements of Reusable Object Oriented Software, Erich Gamma, and Pearson.

5. Design Patterns in Java Second Edition by Steven John Metsker, Pearson.

**Savitribai Phule Pune University**

**Fourth Year of Information Technology Engineering (2015 Course)**

**414468: Project Work**

**Semester- II**

**Teaching Scheme: Examination Scheme:**

**TUT:06 Hours/Week TW:50 Marks**

**Credits:06 OR:100 Marks**

**Prerequisites:**

1. BE-Project Phase I – Semester I

2. Project Based Seminar

**Course Objectives:**

1. The object of Project Work II & Dissertation is to enable the student to extend further the investigative study taken up under Project stage 1, either fully theoretical/practical or involving both theoretical and practical work, under the guidance of a Supervisor from the Department alone or jointly with a Supervisor drawn from R&D laboratory/Industry.

2. To expose students to product development cycle using industrial experience, use of state of art technologies.

3. To encourage and expose students for participation in National/International paper presentation activities and funding agency for sponsored projects.

4. Exposure to Learning and knowledge access techniques using Conferences, Journal papers and anticipation in research activities.

5. Evaluate the various validation and verification methods

6. Analyzing professional issues, including ethical, legal and security issues, related to computing projects.

**Course Outcomes:**

By the end of the course, Students will

1. Learn teamwork.

2. be well aware about Implementation phase.

3. Get exposure of various types of testing methods and tools.

4. Understand the importance of documentation.

**Contents**

**Review 3:**

Based on Implementation (50% implementation expected)

**Review 4:**

Complete Project and Testing

All the groups should try to overcome all the lacunas identified by the external examiner during

Project Phase I exam

The group will submit following at the end of semester II.

1. The Workable project.

2. Project report (in Latex/Lyx/latest Word) in the form of bound journal complete in all respect

1 copy for the Institute, 1 copy for guide and 1 copy of each student in the group for certification.

The project report contains the details.

1. Problem definition

2. Requirement specification

3. System design details (UML diagrams)

4. System implementation – code documentation – dataflow diagrams/ algorithm, protocols used.

5. Test result and procedure – test report as per ATP.

6. Conclusions.

7. Appendix

a. Tools used

b. References

c. Papers published/certificates

d. Plagiarism Report of paper and project report from any open source tool one paper should be published in reputed International conference/International.

**Undertaking by Students**

We, the students of B. E. ( IT A ) hereby assure that we will follow all the rules and regulations related to project activity for the academic year 2020-21. The Project entitled “(Attendance Using Face Recognition )” will be fully designed/ developed by us and every part of the project will be original work and will not be copied/ purchased from any source.

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Roll No. | Name of the student | Signature |
| 1 | BEA350 | Akshay Balasaheb Jadhav |  |
| 2 | BEB460 | Atharva Prashant Tillu |  |
| 3 | BEA308 | Shubham Prabhakar Bankar |  |
| 4 | BEA330 | Mayur Atul Dawande |  |

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**Department of Information Technology**

**(With effect from Academic Year 2018-19)**

**Rules & Regulations**

1. All students must enter the correct information in the work book.
2. All the entries in the project work book must be verified by the concerned project guide.
3. Students must report to their respective guide on project day as per the time table.
4. Activities of the project work should be completed as per the project plan only.
5. Project group must submit soft copies of Project Abstract, Project Report and Publications in PDF format only.
6. Project group member submit **two** hard copies of Project Report in the format provided by department.
7. Project work book must be brought at the time of Project Reviews & Project Examination.
8. Any changes, if any, must be countersigned by the concerned project guide.
9. For project reviews and project examination, all students must report 15 minutes before the scheduled time.
10. For any query, concerned guide should be consulted.

**Instructions Regarding Project Proposal and Finalization**

* The project work may involve the designing a system/subsystem or upgrading / improving an existing system.
* The design is to be implemented into a working model (software or hardware or both).
* Group may come up with sponsored project. Sponsorship may not be in terms of money or resources. It might be in terms of just suggesting problem definition and associated guidance.
* Students shall collect the letter required for applying the Institute/Industries for the project sponsorship from project coordinator.
* Students shall share list of suggested projects, prominent domains and respective expert, whom they may contact for guidance, with Project Coordinator.
* Students shall contact respective faculty member along with synopsis for the guidance.
* Students shall meet Project Coordinator for project title registration and submit the synopsis.
* Synopsis must include project title, group members, sponsor details (if any), detailed problem definition, area, abstract, details of existing similar systems if any, scope of the project and software-hardware requirements.
* Sponsorship details include name of sponsoring authority, address, name of guide, sponsorship terms & conditions and respective documents certifying the same from authorities.
* A Panel of experts will approve the project group and title only after presentation. Presentation will cover details mentioned in the synopsis as above.

**Schedule of Project Work**

**Semester I**

|  |  |  |
| --- | --- | --- |
| Sr. No. | Activity | Schedule |
| 1 | Registration of Project groups | July first week |
| 2 | Submission of Project Synopsis | July second week |
| 3 | Project presentations for finalization of title | July last week |
| 4 | Finalization of projects & allotment of guide | August first week |
| 5 | Submission of final synopsis | August second week |
| 6 | First presentation about progress of project work(Review I) | August third week |
| 7 | Second presentation about progress of project work(Review II) | September last week |
| 8 | Submission of partial project report | October first week |
| 9 | Examination of Project part I | As per SPPU |

**Semester II**

|  |  |  |
| --- | --- | --- |
| Sr. No. | Activity | Schedule |
| 1 | Third presentation about progress of project work(Review III) | January third week |
| 2 | Forth presentation about progress of project work(Review IV) | March second week |
| 3 | Submission of final project report and work book | April first week |
| 4 | Examination of Project part II | As per SPPU |

**Guidelines for review process**

**Semester I**

* The group members are expected to present their work undertaken during the semester. Journey of development has to be rationally presented with thorough literature survey.
* Students are expected to deliver presentation covering Problem Statement, Motivation, objectives, Literature Review & prerequisite work to be undertaken for Project development (work would be done in Semester II) .
* In Project Review I, Students shall give outline of the project in prescribed format. The guide and expert panel shall perform evaluation as per the review sheet.
* In Project Review-II, students shall give presentation with respect to feasibility and scope of the work undertaken, requirement analysis & prerequisite work to be undertaken for Project development. The guide and expert panel shall perform evaluation as per the review sheet.

Note: After every review, students shall submit a brief report / presentation. The same shall be included in the project work book after verified and approved by the guide.

**Semester II**

* In project Review III, students shall give presentation with respect to design and development of the project. The guide and expert panel shall perform evaluation as per the review sheet.
* In project Review IV, students shall give presentation with respect to model of project. The emphasis shall be given to testing and validation. The guide and expert panel shall perform evaluation as per the review sheet.

Note: After every review, students shall submit a brief report / presentation. The same shall be included in the project work book after verified and approved by the guide.

**Format for weekly report**

**Details of the Discussion (Weekly) with Guide about the Project work:**

Meeting No: ………1……… Date: ….………… Day: ……………….Time: ……………

Agenda Points:

1) project overview

2) scope of project

Discussion:

How the project model will work and the scope of the project in real time scenario were discussed

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Roll No. | Name of the student | Signature |
| 1 | BEA350 | Akshay Balasaheb Jadhav |  |
| 2 | BEB460 | Atharva Prashant Tillu |  |
| 3 | BEA308 | Shubham Prabhakar Bankar |  |
| 4 | BEA330 | Mayur Atul Dawande |  |

Remark by guide

Agenda for next meeting

**s**

Signature of Project Guide

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Department of Information Technology

**PROJECT REVIEW–I**

**(Academic Year: 2020-21)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Group id: 31** | | |  | | | **Date :** |
| **Project Title: Attendance Using Face Recognition** | | | | | | |
| **Sr.No.** | **RollNo.** | **Student Name** | | **Contact Details** | **Internal/ External Guide Details** | |
| 1. | **A350** | **Akshay Balasaheb**  **Jadhav** | | **7769972889** | **Guide Name:**  **Prof. Supriya Patil** | |
| 2. | **B460** | **Atharva Prashant Tillu** | | **8983644757** | **Guide Email & Mobile No.:**  [**Supriya.patil@zealeducation.com**](mailto:Supriya.patil@zealeducation.com)  **7620452227** | |
| 3. | **A308** | **Shubham Prabhakar Bankar** | | **7875390380** |
| 4. | **A330** | **Mayur Atul Dawande** | | **7378904856** |

**REVIEW-I CHECKLIST: FINALIZATION OF SCOPE 25 Marks**

|  |  |
| --- | --- |
| **PROJECT STATEMENT** |  |
| 1. Is the statement short and concise (10-20 words maximum)? | Y/N/NA/NC\* |
| 1. Does the statement gives clear indication about what your project will accomplish? | Y/N/NA/NC\* |
| 1. Can a person who is not familiar with the project understand scope of the project by reading the Project Problem Statement? | Y/N/NA/NC\* |
| **REQUIREMENT: SCOPE AND OBJECTIVES** |  |
| Does the Scope and Objectives establish the "context" for the proposed project by referencing to the following elements: | Y/N/NA/NC\* |
| 1. Area all aspects of the requirements document (i.e., Functional Spec.) addressed in the design? | Y/N/NA/NC\* |
| 1. Is the architecture/ block diagram well defined and understood? | Y/N/NA/NC\* |
| 1. The project's objective of study (what product, process, resource, etc.) is being addressed | Y/N/NA/NC\* |
| 1. The project's purpose: is the purpose of project addressed properly (why it's being pursued: to evaluate, reduce, increase, etc.)? | Y/N/NA/NC\* |
| 1. The project's viewpoint: is the project's viewpoint is understood? (who is the project's end user)? | Y/N/NA/NC\* |
| 1. Is the project goal statement is in alignment with the sponsoring organization's business goals and mission? | Y/N/NA/NC\* |
| **ANALYSIS** | Y/N/NA/NC\* |
| 1. Is information domain analysis complete, consistent and accurate? | Y/N/NA/NC\* |
| 1. Is problem statement categorized in identified area and targeted towards specific area therein? | Y/N/NA/NC\* |
| 1. Are external and internal interfaces properly defined? | Y/N/NA/NC\* |
| 1. Does the Use Case Model properly reflects the actors and their roles and responsibilities? | Y/N/NA/NC\* |
| 1. Are all requirements traceable to system level? | Y/N/NA/NC\* |
| 1. Is similar type of methodology / model is used for existing work? | Y/N/NA/NC\* |
| 1. Are requirements consistent with schedule, resources and budget? | Y/N/NA/NC\* |

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Department of Information Technology

**PROJECTREVIEW–I**

**(Academic Year: 2020-21)**

**STUDENT PERFORMANCE EVALUATION**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Student's Contribution Performance:** | | | | |
| **Particulars** | **Marks (25M)** | | | |
| **Group Members** | | | |
| **1** | **2** | **3** | **4** |
| 1. Background and Topic (4M) |  |  |  |  |
| 1. Project Scope and Objectives (4M) |  |  |  |  |
| 1. Literature Survey (5M) |  |  |  |  |
| 1. Project Planning (4 M) |  |  |  |  |
| 1. Presentation Skills (4M) |  |  |  |  |
| 1. Question and Answer (4M) |  |  |  |  |
| **Total (25M)** |  |  |  |  |
| **Comments (if any)** | | | | |

# To be filled by internal guide & reviewer(s) only.

\* Whether the presentation / evaluation is as per the schedule. : YES / NO (If NO mention the reasons for the same.)

**Review – I: Deliverables**

• Problem Statement / Title

• Purpose, Scope, Objectives

• Abstract (System Overview)

• H/W,S/W & other requirement, Test Environment/Tools

• (System Overview- Proposed system &Proposed outcome)

* Architecture & DFD

• References

• Project Plan 1.0

Name & Signature of evaluation committee-

Name of Reviewer 1 Name of Reviewer 2 Name of Internal Guide

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Department of Information Technology

**PROJECT REVIEW–II**

**(Academic Year: 2020-21)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Group id:** | | **31** | | **Date :20/04/2021** |
| **Project Title: Student Attendance System Via Face Recognition using Python** | | | | |
| **Sr.No.** | **RollNo.** | **Student Name** | **Contact Details** | **Internal/ External Guide Details** |
| 1. | **50** | **Akshay B Jadhav** | **7769972889** |  |
| 2. | **08** | **Shubham P Bankar** | **7875390380** |  |
| 3. |  | **Atharva P Tillu** | **8983644756** |  |
| 4. | **30** | **Mayur A Dawande** | **9607659759** |  |

**REVIEW-II CHECKLIST: DESIGN 25 Marks**

|  |  |
| --- | --- |
| **DESIGN** | Y/N/NA/NC\* |
| 1. Are requirements reflected in the system architecture? | Y/N/NA/NC\* |
| 1. Does the design support both project (product) and project goals? | Y/N/NA/NC\* |
| 1. Does the design address all the issues from the requirements? | Y/N/NA/NC\* |
| 1. Is effective modularity achieved and modules are functionally independent? | Y/N/NA/NC\* |
| 1. Are structural diagrams (Class, Object, etc.) well defined and understood? | Y/N/NA/NC\* |
| 1. Are all class associations clearly defined and understood? (Is it clear which classes provide which services)? | Y/N/NA/NC\* |
| 1. Are the classes in the class diagram clear? (What they represent in the architecture design document?) | Y/N/NA/NC\* |
| 1. Is inheritance appropriately used? | Y/N/NA/NC\* |
| 1. Are the multiplicities in the use case diagram depicted in the class diagram? | Y/N/NA/NC\* |
| 1. Area behavioral diagrams (use case, sequence, activity, etc.) will defined and understood? | Y/N/NA/NC\* |
| 1. Is aggregation/ contaminant (if used) clearly defined and understood? | Y/N/NA/NC\* |
| 1. Does each case have clearly defined actors and input/ output? | Y/N/NA/NC\* |
| 1. Is all concurrent processing (if used) clearly understood and reflected in the sequence diagrams? | Y/N/NA/NC\* |
| 1. Are all objects used in sequence diagram? | Y/N/NA/NC\* |
| 1. Does the sequence diagram match class diagram? | Y/N/NA/NC\* |
| 1. Are the symbols used in all diagrams correspond to UML standards? | Y/N/NA/NC\* |
| 1. Does code completely & correctly implement the design? | Y/N/NA/NC\* |
| 1. Does code comply with coding standards? | Y/N/NA/NC\* |
| 1. Is code well structured ,consistent in style & consistently formatted? | Y/N/NA/NC\* |
| 1. Are basic functions in the design coded? | Y/N/NA/NC\* |
| 1. Is code clearly & adequately documented? | Y/N/NA/NC\* |
| 1. Is test results highlighted? | Y/N/NA/NC\* |

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Department of Information Technology

**PROJECT REVIEW–II**

**(Academic Year: 2020-21)**

**STUDENT PERFORMANCE EVALUATION**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Students' Contribution and Performance** | | | | |
| **Particulars** | **Marks (25 M)** | | | |
| **Group Members** | | | |
| **1** | **2** | **3** | **4** |
| 1. System Architecture & Literature Survey (Review-I) |  |  |  |  |
| 1. Project Design (4 M) |  |  |  |  |
| 1. Techniques/Methodology /Algorithms and Project Features (3 M) |  |  |  |  |
| 1. Project Planning (4 M) |  |  |  |  |
| 1. Basic details of Implementation( Working module) (4 M) |  |  |  |  |
| 1. Presentation Skills ( 4 M) |  |  |  |  |
| 1. Question and Answer (2 M) |  |  |  |  |
| 1. Summarization of Ultimate findings of the Project (2 M) |  |  |  |  |
| 1. Test Results(2 M) |  |  |  |  |
| **Total (25 M)** |  |  |  |  |
| **Comments (if any)** | | | | |

# To be filled by internal guide & reviewer(s) only.

\* Whether the presentation / evaluation is as per the schedule. : YES / NO (If NO mention the reasons for the same.)

**Review-II : Deliverables**

* Problem Statement / Title

**Student Attendance System Via Face Recognition using Python**

* Abstract

The main purpose of this project is to build a face recognition-based attendance monitoring system for educational institution to enhance and upgrade the current attendance system into more efficient and effective as compared to before. The current old system has a lot of ambiguity that caused inaccurate and inefficient of attendance taking. Many problems arise when the authority is unable to enforce the regulation that exist in the old system. Thus, by means of technology, this project will resolve the flaws existed in the current system while bringing attendance taking to a whole new level by automating most of the tasks. The technology working behind will be the face recognition system.

* Introduction

We are living in a world where everything is automated and linked online. The internet of things, image processing, and machine learning are evolving day by day. Many systems have been completely changed due to this evolve to achieve more accurate results. The attendance system is a typical example of this transition, starting from the traditional signature on a paper sheet to face recognition.

* Literature Survey (comparison with existing system)

|  |  |  |  |
| --- | --- | --- | --- |
| 1.​ | Local Binary pattern ​ | High tolerance against the monotonic illumination changes. ​ | Overall performance is accurate.​ |
| 2.​ | AdaBoost algorithm ​  (part of Viola jones algorithm) ​ | Need not to have any prior knowledge about face structure. ​ | The result highly depends on the training data and affected by weak classifiers. ​  ​ |
| 3.​ | Neural-Network ​  ​ | High accuracy only if large size of image were trained. ​  ​ | Overall performance is weaker than LBPH algorithm. ​  ​ |

* Methodology
* Design / algorithms / techniques used
* Modules Split-up
* Proposed System
* Traditional student attendance marking technique is often facing a lot of trouble.
* Our system emphasizes its simplicity by eliminating classical student attendance marking technique such as marking attendance on paper.
* There causes distraction for students during exam sessions and there are human errors many times.
* The lecture class especially the class with a large number of students might find it difficult to have the attendance sheet being passed around the class .
* Thus, face recognition student attendance system is proposed in order to replace the manual signing of the presence of students.
* Furthermore, the face recognition based automated student attendance system able to overcome the problem of fraudulent approach.
* Software Tools/Technologies to be used
* Working module
* Partial Report (Semester – I)
* Project Plan 2.0

Name & Signature of Evaluation Committee –

Name of Reviewer 1 Name of Reviewer 2 Name of Internal Guide

**Contribution of the project work (Publications/Patent/Prizes)**

**Publications**

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Title of the paper | Conference/ Journal | Place if Conference |
|  |  |  |  |
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**Patents**

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Title of the patent | Registration Number | Date of application |
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**Prizes**

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Name of the competition | Organizing institute | Prize |
|  |  |  |  |
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**Savitribai Phule Pune University**

**Faculty of Information Technology**

**Examination Evaluation Guidelines**

Along with Internal Examiner, the External Examiner should see their Partial or Final project reports, project log book and the presentation of each group along with live project demonstration (applicable in second semester).

There is a possibility that the marks obtained in B.E. Projects by various groups across the university may not be uniform because of the involvement of many examiners. It is expected that the examiners should evaluate the students rigorously. Both the examiners are supposed to evaluate each student / group based on some or all of the following points. Also the evaluation of the examiners must be fair enough so that the student gets appropriate credit/ marks for his/her efforts. Marks breakup is enclosed in the attached excel sheet

The following are the guidelines for the presentation and should be shared with the students.

1. Purpose or Significance or Motivation of Study / topic identified
2. Objectives of Problem Statement
3. Technical relevance and originality of problem
4. Literature reviewed followed by sufficient requirements analysis
5. Design and coding effort along with best practices followed
6. Analysis, interpretation, implementation and validity of results
7. Extent of technical knowledge and coding skill gained
8. Use of project management techniques and maintaining project log Book.
9. Use of modern CASE tools and techniques in development (if required for the problem)
10. Team-work and collaboration
11. Use of professional ethics and social relevance
12. Presentation Skills
13. Answers to questions - analysis, depth of understanding of problem/ conclusions/ inference
14. Project Report / Thesis Contents Quality

NOTE:

* 1. The project groups obtaining more than 90% of marks in the project exam may be moderated by the committee appointed by the University of Pune.
  2. The evaluation sheet enclosed should be duly filled according to project group and sent along with the chairman copy of the mark list
  3. The project guide should initiate the presentation in the project examination (Sem-I to create a context and to understand the motivation of the project topic.

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**SEMESTER - I**

**External Examination Evaluation Sheet**

**Programme of Term-work Examination BE IT**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Exam Seat No.** | **Originality of Problem Statement Attainment of Objectives** | **Analysis & Design** | **Presentation Skills** | **Answers to questions- analysis, depth of understanding the problem/ conclusions/ inference** | **Content Quality of Partial Project Report** | **Total (out of 50)** |
| **Marks →** | | **5** | **20** | **5** | **10** | **10** | **TW** |
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Signature Signature

Internal Examiner External Examiner