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**Department of Computer Engineering**

**Bandstand, Bandra(W) - 400 050 University of Mumbai**

(AY 2020-21)

MAJOR PROJECT – I

LOGBOOK

**Class: B.E. Computer**

Group Members:

1. Mohit Kunder (8344)
2. Benita Rego (8362)
3. Nolita Rego (8363)

Supervisor:

Prof. Sunil D Chaudhari

# INSTITUTE VISION & MISSION

## VISION:

"Moulding Engineers Who Can Build the Nation"

CRCE will be a center of Excellence in Engineering Education, moulding engineers with state-of-the-art technologies, innovative skills and human values matching with the growing expectations of the corporates and the society and thus play an effective role in nation-building.

## MISSION:

1. Create an excellent scholastic ambiance for students and faculty, by providing facilities with state-of-the-art technologies and continuously updating based on the needs of user organizations.
2. Attract, develop and retain teaching faculty of academic excellence, dedication and commitment.
3. Design the academic administration system to ensure an effective teaching-learning process facilitating participation from students and teachers and enabling continuous improvement through evaluation and feedback.
4. Provide avenues for the holistic development of students to become competent engineers with interpersonal skills, leadership qualities, and social concern.
5. Maintain economic discipline, continuously work for optimal utilization of resources and resource generation through consultancy to make quality education affordable. Everybody in the organization to be a role model for integrity, upholding ethical values, fairness, and transparency in all dealings.

# COMPUTER ENGINEERING DEPARTMENT

## VISION:

To grow as a center of excellence and prepare high-quality engineering graduates capable of excelling in their chosen field of an enterprise through an innovative and rigorous approach to education.

## MISSION:

1. To blend theoretical knowledge with practical applications by imparting high standard technical education.
2. To provide the techno-managerial skills for achieving excellence in their respective area of specialization. To provide the techno-managerial skills for achieving excellence in their respective area of specialization.
3. To encourage faculty involvement in pursuing academic excellence through quality research and publications.

# PROGRAM EDUCATIONAL OBJECTIVES (PEO's)

At the completion of the program, students will have the ability to

**PEO1:** Analyze, formulate and provide solutions for real-world problems with social ethics using fundamental scientific, mathematical and computing knowledge.

**PEO2:** Adapt to the ever-changing technologies in computer science and apply them in multidisciplinary scenarios.

**PEO3:** Develop and demonstrate leadership and interpersonal skills to work individually and as part of a team.

# PROGRAM OUTCOMES (POs)

|  |  |
| --- | --- |
| **PO's** | **OUTCOMES** |
| PO1 | **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems. |
| PO2 | **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences. |
| PO3 | **Design/Development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and the cultural, societal, and environmental considerations. |
| PO4 | **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis, and interpretation of data, and synthesis of the information to provide valid conclusions. |
| PO5 | **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling of complex engineering activities with an understanding of the limitations. |
| PO6 | **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice. |
| PO7 | **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and the need for sustainable development. |
| PO8 | **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice. |
| PO9 | **Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. |
| PO10 | **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions. |
| PO11 | **Project Management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one’s work, as a member and leader in a team, to manage projects and in multidisciplinary environments. |
| PO12 | **Life-long learning:**Recognized the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. |

**PROGRAM SPECIFIC OUTCOMES (PSOs)**

|  |  |
| --- | --- |
| PSO1 | Apply fundamental computer science knowledge to address real-world challenges /opportunities. |
| PSO2 | Design and implement computing systems of varying complexity in multidisciplinary scenarios that meet specified requirements with appropriate consideration to architectural, algorithmic and security aspects. |

**STUDENT INFORMATION**

## Project Title: AI-based Social Media Data Analysis for Mental Health Evaluation

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Student 1** | **Student 2** | **Student 3** |
| **Roll No** | 8362 | 8363 | 8344 |
| **Name** | Benita Rego | Nolita Rego | Mohit Kunder |
| **Class with Division** | B.E. COMPUTER | B.E. COMPUTER | B.E. COMPUTER |
| **Contact No.** | 9892938847 | 7715816259 | 7977032378 |
| **E-mail** | regobenita26@gmail.com | nolitarego@gmail.com | mohitkunder2@gmail.com |
| **Address** | 9, Dhawalgiri CHS, Vakola, Santacruz (E), Mumbai-400055 | 9, Dhawalgiri CHS,  Vakola, Santacruz (E), Mumbai-400055 | Green Fields Society, JVLR, Andheri (E), Mumbai-400093 |

**INSTRUCTIONS TO STUDENTS:**

1. The logbook must be submitted to the Guide or Co-Guide for verification and evaluation of project activities at least once in a week.
2. Logbook duly signed by a guide must be submitted with a project report for evaluation at the end of semester to the department.

# DECLARATION

I declare that this project represents my ideas in my own words and wherever others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my project work. I promise to maintain minimum 75% attendance, as per the University of Mumbai norms. I understand that any violation of the above will be cause for disciplinary action by the Institute.

Yours Faithfully

1. Mohit Kunder

2. Benita Rego

3. Nolita Rego

(Signature of Students)

# Letter of Acceptance

I undersigned, Prof. Sunil Chaudhari working in Computer Engineering department, willing to guide the project titled ‘AI-based Social Media Data Analysis for Mental Health Evaluation’

for the Major Project (I) in Semester VII respectively for the academic year 2020-21.

The names of the students are:

1. Mohit Kunder

2. Benita Rego

3. Nolita Rego





(Project Guide) (Project Coordinator) (HOD Computer)

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# COURSE OUTCOMES

|  |  |  |  |
| --- | --- | --- | --- |
| **CO**  **No.** | **COURSE OUTCOME** | **POs covered** | **PSOs**  **covered** |
| CO1 | Identify a problem and propose a software solution | PO1, PO2, PO9, PO11, PO12 |  |
| CO2 | Identify, summarize and analyze an appropriate literature and relate them to the problem in hand | PO1, PO2, PO9, PO11, PO12 |  |
| CO3 | Design a solution to chosen problems using appropriate approach or methodology considering professional ethics and responsibility towards societal, health, safety and legal issues. | PO1, PO3, PO5, PO6, PO8, PO9, PO11, PO12 | PSO1 |
| CO4 | Showcase their oral and written communication skills | PO9, PO10 |  |

**CO-PO-PSO MAPPING**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** | **PSO1** | **PSO2** |
| **CO1** | 3 | 2 |  |  |  |  |  |  | 3 |  | 1 | 2 |  |  |
| **CO2** | 3 | 3 |  |  |  |  |  |  | 3 |  | 1 | 2 |  |  |
| **CO3** | 3 |  | 3 |  | 3 | 2 |  | 2 | 3 |  | 3 | 3 | 3 |  |
| **CO4** |  |  |  |  |  |  |  |  | 3 | 3 |  |  |  |  |

**SCHEDULE FOR MAJOR PROJECT I**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Week** | **Contents** | **Remark** | **Guide Sign** |
| 30/08/2020 | 1 | * Decided the flow of the project * Referred to research papers which will be a guide for the project throughout. |  |  |
| 06/09/2020 | 2 | * Created a Twitter developer account to get the API keys (took around 5 days) |  |  |
| 28/09/2020 | 3 | * Visualized the data using Power BI to correlate the data with each other. * Implemented code for fetching the live twitter data |  |  |
| 04/10/2020 | 4 | * Wrote code for Text evaluation using NLP * Cleaning and tokenizing the data |  |  |
| 11/10/2020 | 5 | * Used TextBlob to get the polarity of each tweets * Classified the tweets whether it is positive, negative or neutral |  |  |
| 19/10/2020 | 6 | * Split the data to train and test (90% data for training and 10% for testing) * Built Vocabulary for training and testing data to get the length of the sentence and total number of words |  |  |
| 26/10/2020 | 7 | * Loaded the Word2Vec model and passed the cleaned text for word embedding and padding sequences |  |  |
| 08/11/2020 | 8 | * Implemented code for passing the cleaned text to CNN where we did categorical classification |  |  |
| 23/11/2020 | 9 | * Data training with the number of epochs used with trial and error * Since we have a large dataset of over 38k, our model is overfit. |  |  |
| 30/11/2020 | 10 | * Test data on model with accuracy increased with different number of epochs * Graphical visualization |  |  |
| 07/12/2020 | 11 | * Created a basic User interface template for the mobile application (Integration to be done later) |  |  |
| 17/12/2020 | 12 | * Documentation |  |  |

**PROGRESS/ATTENDANCE REPORT**

|  |  |
| --- | --- |
| Title of the Project: AI-based Social Media Data Analysis for Mental Health Evaluation | |
| Group No: BECOMP\_08 | Name of Student 1: Mohit Kunder |
| Name of Student 2: Benita Rego |
| Name of Student 3: Nolita Rego |
| Name of the Supervisor: Prof. Sunil D Chaudhari | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sr. No | Date | Attendance | | | Progress/Suggestion | Mapping | | |
| 1 | 2 | 3 |  | CO | PO | PSO |
| 1 |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |

**Sign of the Supervisor**

# EXAMINER'S FEEDBACK FORM

Name of External examiner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

College of External examiner:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name of Internal examiner:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date of Examination: / / No. of students in project team: \_\_\_\_\_

Availability of separate lab for the project: Yes / No

**Student Performance Analysis** (Put Tick as per your Observation)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Excellent (3) Very Good (2) Good (1)** | | | | |
| **Sr. No.** | **Observation** | **(3)** | **(2)** | **(1)** |
| 1 | Quality of problem and Clarity |  |  |  |
| 2 | Innovativeness in solutions |  |  |  |
| 3 | Cost effectiveness and Societal impact |  |  |  |
| 4 | Full functioning of working model as per stated requirements |  |  |  |
| 5 | Effective use of skill sets |  |  |  |
| 6 | Effective use of standard engineering norms |  |  |  |
| 7 | Contribution of an individual’s as member or leader |  |  |  |
| 8 | Clarity in written and oral communication |  |  |  |
| 9 | Overall performance |  |  |  |

* Is the work done by the project group substantial to proceed in the next semester? (Yes/ No)
* If No, suggest new Innovative Technique/Idea/ objectives related to this project.



## Signature of External Examiner Signature of Internal Examiner

**Fr. Conceicao Rodrigues College of Engineering, Bandra**

**Department of Computer Engineering**

**B.E. Computer Engineering (Semester VII)**

**Mentoring Report**

**(Academic Year 2020-21)**

**Mentor: Prof. Mahendra Mehra**

**Assessment Criteria:**

|  |  |  |  |
| --- | --- | --- | --- |
| **% of Attendance** | **Attendance** | **Marks scored** | **Unit Test 1-2** |
| **Less than 50%** | **Poor** | **Less than 8** | **Poor** |
| **51% TO 74%** | **Average** | **8 to 15** | **Average** |
| **75% TO 89%** | **Good** | **Greater than 15** | **Good** |
| **90% and above** | **Excellent** |

**Class: B.E. Computer (2020-21) -Semester VII**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr.**  **no** | **Name** | **Roll No** | **Attendance Performance before UT1** | **Unit Test 1**  **Performance** | **Mentor Remarks** | **Action Taken** |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr.**  **no** | **Name** | **Roll No** | **Attendance Performance before UT2** | **Unit Test 2**  **Performance** | **Mentor Remarks** | **Action Taken** |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |