**OUTSIDE**

**BLACK PROJECT COVER PAGE**

**PRINTED**

**IN GOLD**

**<on the side rim printed in gold include <project title> and A.Y. 2020 – 21>**

**Blank Sheets:**

In addition to the white sheets (binding requirement) two white sheets shall be put at the beginning and the end of the thesis.

**PROJECT TITLE**

**{Times New Roman-18 (Bold) At Center}**

Submitted in partial fulfillment of the requirements

of the degree of

{Times New Roman-12}

**B. Tech. Artificial Intelligence (AI) and Data Science**

**{Times New Roman-15 (Bold)}**

By

**Name of the Student SAPID**

**Name of the Student SAPID**

**Name of the Student SAPID**

Name of Internal guide

Guide(s):

**Name of the Guide**

Designation

IN-HOUSE PROJECTS omit this.

OUT-HOUSE PROJECTS

Put the name & designation of the External guide

**Name of the External Guide**

Designation

|  |  |  |
| --- | --- | --- |
|  |  |  |

University of Mumbai

2024-2025

**INSIDE**

**PAGES**

**[See General instructions for page setup & other instructions]**

**CERTIFICATE**

This is to certify that the project entitled **“Title of Project”** is a bonafide work of **“Name of the Student” (SAP ID.)** submitted to the University of Mumbai in partial fulfillment of the requirement for the award of the degree of B.Tech. in Artificial Intelligence (AI) and Data Science

IN-HOUSE PROJECTS omit this.

OUT-HOUSE PROJECTS

Put the name of the External guide

**(Name and sign) (Name and sign)**

**Internal Guide External Guide**

**(Name and sign) (Name and sign)**

**Head of Department Principal**

CERTIFICATE

(Only for students doing out house projects- They have to add a letter from the company in which they registered, stating that they have successfully completed their project at the company)

**Project Report Approval for B.E.**

This project report entitled (***Title***) by (***Author Name***) is approved for the degree of ***B.E. in Computer Engineering.***

Examiners

1.---------------------------------------------

2.---------------------------------------------

Date:

Place:

Declaration

I/We declare that this written submission represents my/our ideas in my/our own words and where others' ideas or words have been included, I/We have adequately cited and referenced the original sources. I/We also declare that I/We 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/our submission. I/We understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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

(Signature)

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

(Name of student and Roll No.)

Date:

**Abstract**

The 500 word abstract shall highlight the important features of the project report and shall correspond to the electronic version to be submitted to the Library for inclusion in the website.

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Appendix

Literature Cited

Publications by your group (if any)

Acknowledgements

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**List of Abbreviations**

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Abbreviation** | **Expanded form** |
| i | DSS | Decision Support System |
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**Chapter 1**

**Introduction**

It shall justify and highlight the problem posed, define the topic and explain the aim and scope of the work presented in the report. It may also highlight the significant contributions from the investigation.

* 1. **Description**

Matter {Times New Roman – 12}

* 1. **Problem Formulation**

Matter {Times New Roman – 12}

**Chapter 2**

**Review of Literature**

Present a critical appraisal of the previous work published in the literature pertaining to the topic of the investigation.

**Chapter 9**

**Results and Discussions**

This shall form the penultimate chapter of the report and shall include a thorough evaluation of the investigation carried out and bring out the contributions from the study. The discussion shall logically lead to inferences and conclusions as well as scope for possible further future work.

**Chapter 10**

**Conclusions**

This will be the final chapter of the report. A brief report of the work carried out shall form the first part of the Chapter. Conclusions derived from the logical analysis presented in the Results and Discussions Chapter shall be presented and clearly enumerated, each point stated separately. Scope for future work should be stated lucidly in the last part of the chapter.

**Appendix**

Detailed information, lengthy derivations, raw experimental observations etc. are to be presented in the separate appendices, which shall be numbered in Roman Capitals (e.g. “Appendix I”). You can include the standard algorithms that are part of the project’s concept and which are not already explained in the report.

**Literature Cited**

**IEEE standard**

**Book,**

[1] J. F. Curtis, (Ed.), *Processes and Disorders of Human Comm-unication.* New York: Harper and Row, 1978.

**Journal Paper,**

[2] J. Schroeterand M. M. Sondhi, “Techniques for estimating vocal-tract shapes from the speech signal,”*IEEE Trans. Speech Audio Process.*, vol. 2, no. 1, pp. 133–150, 1994.

**Proceeding paper,**

**[3]** J. M. Pardo, “Vocal tract shape analysis for children,” in *Proc. IEEE Int. Conf. Acoust., Speech, Signal Process.*, 1982, pp. 763–766.

**Publications**

Articles, technical notes etc. on the topic of the report published by the candidate may be separately listed after the literature cited. This may also be included in the contents. The candidates may also include reprints of his/her publications after the literature citation.

**Acknowledgements**

**General Instructions:**

**1)** Project cover should be in black color & golden embossing

**2)** **Paper:** The report shall be printed / xeroxed on white bond paper, whiteness 95% or above, weight 70 gram or more per square meter. The size of the paper shall be standard A4; height 297 mm, width 210 mm.

**3)** **Type Setting, Text Processing and Printing:** The text shall be printed on both sides of a page employing laser jet or Inkjet printer, the text having been processed using a standard text processor. The standard font shall be **Times New Roman** of **12 pts** with **1.5 line spacing**.

**4)** **Pagination:** Page numbering in the text of the report shall be Hindu- Arabic numerals at the center of the footer. Page number “1” for the first page of the Introduction chapter shall not appear in print; only the second page will bear the number “2”. The subsequent chapters shall begin on a fresh page. Pagination for pages before the Introduction chapter shall be in lower case Roman numerals, e.g., “iv”.

**5)** **Header:** The header should have the Chapter number and Name (e.g., Chapter 1

Introduction) on even numbered page headers and Section Number and title (e.g. 1.2

Problem Formulation) on the odd numbered page header.

**6)** **Page Format:**

The Printed Sheets shall have the following written area and margins:

Top Margin : 15 mm

Head Height : 3 mm

Head Separation : 12 mm

Bottom Margin : 22 mm

Footer : 3 mm

Foot Separation : 10 mm

Left Margin : 30 mm

Right Margin : 20 mm

Text Height : 245 mm

Text Width : 160 mm

When header is not used the top margin shall be 30 mm.

1. Use the data font & font-size as mentioned in the respective places. Wherever there is no mention of it use the following.
2. Data font & font-size

Headings-----Times New Roman (Bold)—16

Subheading----Times New Roman (Bold)—14

Remaining Contents-- Times New Roman—12

1. All page numbers should be at bottom-centre of the page
2. Page numbers should be in Roman till List of Abbreviations
3. Page numbers for all the pages after List of Abbreviations should be in English

6. Line Spacing should be 1.5

**7)** Limit for number of pages in the project report = 80-100

**8) Figures and tables** should be labeled in the following manner

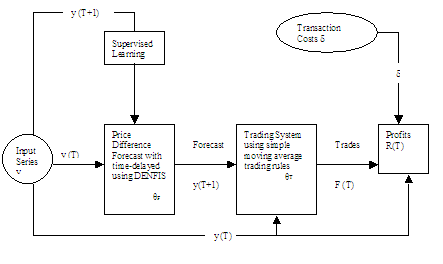


Fig. 2.1 Overall Architecture of the Proposed system

Figure

Fig. 1**: C**aptions should be in 10 pt Times New Roman font at the bottom of the figure. The caption text should be centered if it fits in one line otherwise justified.

In case of tables the labeling of tables should be done above the table and not below it. Other specifications are similar to that of Figure.

**9)** **Equations** should be centered and numbered in the order of first occurrence in the text. The equation numbers should appear in 11 pt. on the right hand side of the column enclosed by the parentheses ( ).

**INDEX**

1. INTRODUCTION
   1. Description

The main functionality of the project should be explained in brief

* 1. Problem Formulation

***(Explain the problem)***

* 1. Motivation

(***(need of the project)***: List the various approaches along with its drawbacks for solving the problem and briefly explain the approach used for your project.)

* 1. Proposed Solution

(Explain the method/technique used for solving the problem and how it overcomes the drawbacks mentioned under heading 1.3. Also explain how the project is going to help end users.)

* 1. Scope of the project

(***(scale/range of your project)*:** Extent of how far your project can be completed. This can be in terms of domain or application related constraints/limitations.)

1. REVIEW OF LITERATURE

***(include at least 3IEEE or similar reputed technical papers as reference*)** Should be atleast 2 pages which gives the ideas referenced by the reference papers. Mark the references wherever appropriate. (Note: - Please don’t write the paper titles and the abstract of papers.)

1. SYSTEM ANALYSIS
   1. Functional Requirements

***( write requirements of the project)*** Should follow the IEEE SRS format

* 1. Non-Functional Requirements

Should follow the IEEE SRS format

* 1. Specific Requirements

***(Hardware and software requirements)***

* 1. Use-Case Diagrams and description

***(Application development projects use-case is mandatory)***

1. ANALYSIS MODELING
   1. Data Modeling

***(E-R Model if any with its associated Data dictionary****)* Applicable for those applications which are dependent on data storage and retrieval. ER Diagram normalized till the third normal form accompanied by the respective data dictionary table should be included

* 1. Activity Diagrams / Class Diagrams

Depending on the type of your project you may include any of the diagrams**.**

* 1. Functional Modeling (DFDs *with specifications)* *mandatory for all projects*
  2. TimeLine Chart *(For the entire year)*

1. DESIGN
   1. Architectural Design (*Project Flow /architecture* *with description)*
   2. User Interface Design
2. IMPLEMENTATION
   1. Algorithms / Methods Used

Mention your algorithms if any or any methodology used.

* 1. Working of the project *(code for mentioned algorithms)*

1. TESTING

***(white box /black-box / any testing algorithm used)***

* 1. Test cases *(conditions on which testing is done)*
  2. Type of Testing used *(explanation and reason of testing method used)*

1. RESULTS AND DISCUSSIONS (***(final results or outputs)***)
2. CONCLUSIONS & FUTURE SCOPE
3. REFERENCES / BIBLIOGRAPHY