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**AD8512 - Mini Project on Data Sciences Pipeline**

**GUIDELINES – PROJECT REPORT**

|  |  |  |
| --- | --- | --- |
| **SL. NO.** | **CONTENT** | **DESCRIPTION** |
| 1 | **Cover Page & Title Page** | 1. Use font and size as per the given specification. (Appendix 5) 2. The register number of all the students in a batch should be given within brackets next to their respective names. 3. The names should be arranged in the alphabetical order 4. Anna university logo ( in the top left side) and college logo(in the top right side) should be included |
| 2 | **Bonafide Certificate** | 1. The Bonafide Certificate shall be in **double line** spacing using Font Style **Times New Roman** and **Font Size 14**, as per the format. (Appendix 6) 2. Name and designation of the supervisor and HoD |
| 3 | **Abstract** | 1. Abstract should be **one page** synopsis of the project report typed **double line** spacing, Font Style **Times New Roman** and **Font Size 14** (Appendix 1) 2. Content should be organized as per the format given in the appendix 1. |
| 4 | **Acknowledgement** | 1. The Name with initials, Spelling and Designation and of faculty members mentioned in acknowledgement should be typed properly and verified perfectly. 2. Font style: Times new Roman, Size:**12**, in one page with **one and half line** spacing. |
| 5 | **Table of Contents** | 1. The title page and Bonafide Certificate will not be listed in the Table of Contents. 2. **One and a half spacing** should be adopted for typing the matter under this head. 3. **Appendix** and **references** should be included after the conclusion. 4. **Chapter number** should not be given for the appendix and references 5. **Page number** should be given for the appendix and references. 6. **Acknowledgement**  should be included after the abstract 7. **Company certificate**  should be included after the bonafide certificate (if applicable) 8. Table of Contents to be prepared as per the format given in appendix 10. |
| 6 | **List of Tables** | 1. The list should use exactly the same captions as they appear **above the tables** in the text. 2. **One and a half spacing** should be adopted for typing the matter under this head. 3. **Tables in the appendix** shall not be mentioned in the list of tables |
| 7 | **List of Figures** | 1. The list should use exactly the same captions as they appear **below the figures** in the text. 2. **One and a half spacing** should be adopted for typing the matter under this head. 3. **Figures in the appendix** shall not be mentioned in the list of tables |
| 8 | **List of Symbols, Abbreviations and Nomenclature** | 1. **One and a half spacing** should be adopted for typing the matter under this head. 2. Standard symbols, abbreviations etc. should be used |
| 9 | CHAPTER 1 : INTRODUCTION  (4-5 Pages) | 1. Contents to give a detailed description about the **domain** and the **project**. 2. **Pictures** relevant to the project shall be used to describe the domain. 3. **Challenges** in the chosen domain shall be discussed and the challenge to be handled by this project also to be discussed as problem definition. 4. **Motivation** to do the project to be described. 5. **Organization** of the report shall be presented at the end of the introduction. |
| 10 | CHAPTER 2 : RELATED WORK (5-7 Pages) | 1. Literature survey related to the project work should be described. 2. Concepts from the technical papers should be discussed in this chapter. 3. Proper citation should be given for the references. 4. Inference of the literature survey must be discussed |
| 11 | CHAPTER 3: SYSTEM ANALYSIS (5-7 Pages) | 1. Discussion on problem definition and proposed solution. 2. Present the SRS. 3. Discussion on software and hardware components used in the project. 4. Avoid presenting general and basic information like history, advantages, disadvantages, etc of any language. Rather any functional component, library routines, APIs, IDEs used in the project shall be discussed in detail. |
| 12 | CHAPTER 4: SYSTEM DESIGN (12-15 Pages) | 1. Detailed explanation about the overall architectural diagram is required. 2. Detailed explanation about the modules is required. 3. Design details of all modules must be explained with the help of relevant UML diagrams. 4. Functional block diagrams must be used to elaborate the design details of each and every module. 5. Input to any module, the process happening in the module and the output of the module, relationships among modules should be explained in detail. 6. Design schema of database must be presented for database oriented projects. |
| 13 | CHAPTER 5: SYSTEM IMPLEMENTATION  (8- 10 Pages) | 1. Algorithm used the project must be discussed in detail. 2. Mathematical implementation if any shall be discussed using equations. 3. Experimental setup for the simulation project must be presented. 4. Functional components of coding should be explained in detail. 5. Implementation details of the project using the software / hardware components or tools must be discussed in detail. |
| 14 | CHAPTER 6: SYSTEM TESTING (2- 3 Pages) | 1. Testing components should be explained as per the format given in Appendix 3. |
| s15 | CHAPTER 7: OUTPUT AND EXPLANATION  (3-5 Pages) | 1. Detailed discussion on the output should be discussed with the help of screen shots. 2. Screen shots presented in the Appendix 2 shall also be referred here. |
| 16 | CHAPTER 8: RESULTS AND DISCUSSION  (2-3 Pages)(Optional) | 1. Any results obtained in the form of graph shall be discussed in this chapter. |
| 17 | CHAPTER 9: CONCLUSION AND FUTURE WORK  (1-2 Pages) | 1. The work completed shall be concluded 2. Ensure that the fulfillment of objective must be discussed in the conclusion. 3. The scope for future extension of the work should be discussed. |
| 18 | APPENDIX 1: SAMPLE CODE (4-5 Pages) | 1. Sample code shall be presented |
| 19 | APPENDIX 2: PAPER PUBLICATION (2-3 Pages) | 1. Certificate of paper presentation in the conference |
| 20 | REFERENCES | 1. The listing of references should be typed 4 spaces below the heading “**REFERENCES**” in alphabetical order in single spacing **with justified alignment.** 2. The reference material should be listed in the **alphabetical order of the first author**. 3. The name of the author/authors should be immediately followed by the year and other details. 4. No separate heading for the online references i.e continuous numbering should be there in the reference.   SAMPLE FORMAT   1. Ariponnammal S. and Natarajan, S. (1994) ‘Transport Phonomena of SmSel – X Asx’, IEEE Transaction on Intelligent Transportation, vol.42, no.1, pp.421-425. 2. Barnard R.W. and Kellogg C. (1980) ‘Applications of Convolution Operators to Problems in Univalent Function Theory’, Michigan Mach Journal., vol.27, no.1, pp.81–94. |
| 21 | **GENERAL TYPING INSTRUCTIONS** | 1. The impression on the typed copies should be black in colour. 2. **One and a half spacing** should be used for typing the general text. The general text shall be typed in the Font style ‘**Times New Roman’** and Font size **12.** 3. **Italic styles shall be avoided** in the project report. Such words can be given in single quotes. 4. Self-descriptive words like **I and We** shall not be used anywhere in the report. 5. Colour images can be used. 6. Entire text must be typed with **justified alignment**. |
| 23 | **CHAPTERS** | 1. Font size for the **chapter number** and the **chapter heading** is **14.** 2. Font size for the **sub heading** and numbers is **12.** 3. Chapter number, Chapter heading and the sub headings shall be typed in bold**.** 4. No **‘:’** is required after the division heading and sub division heading. 5. All side headings must be numbered 6. **Title sheets** between chapters are not allowed.   The format for typing chapter headings, divisions headings and sub division headings are explained through the following illustrative examples.  Chapter heading : **CHAPTER 1**  Division heading : **INTRODUCTION**  Side Division heading : **1.1 OUTLINE OF PROJECT**  Sub-division heading : **1.1.2 Literature review**  The word CHAPTER **without punctuation** should be centered 50mm down from the top of the page. Two spaces below, the title of the chapter should be typed **centrally** in capital letters. The text should commence 2 spaces below this title, the first letter of the text starting 20mm, inside from the left hand margin |
| 24 | **PAGE NUMBERING** | 1. All pages numbers (whether it is in Roman or Arabic numbers) should be typed without punctuation on the **upper right hand corner** 20mm from top with the last digit in line with the right hand margin. 2. The preliminary pages of the project report (such as Title page, Acknowledgement, Table of Contents etc.) should be numbered in **lower case Roman numerals**. 3. The title page will be numbered as (i) but this should not be typed. The page immediately following the title page shall be numbered (ii) and it should appear at the top right hand corner as already specified. 4. Pages of main text, starting with Chapter 1 should be consecutively numbered using Arabic numerals. 5. Ensure that the roman numbers and Arabic numbers are typed in **Times New Roman** font style. |
| 25 | **NUMBERING OF TABLES FIGURES AND EQUATIONS** | 1. Tables and Figures appearing anywhere in the project report should bear appropriate numbers. 2. Thus if as figure in Chapter 3, happens to be the fourth then name it is **Figure 3.4**. 3. Identical rules apply for tables except that the word Figures is replaced by the word Table. 4. If figures (or tables) appear in appendices then figure 3 in Appendix 2 will be designated as **Figure A2.3.** 5. If a table to be continued into the next page this may be done, but no line should be drawn underneath an unfinished table. The top line of the table continued into the next page should, for example read Table 2.1 (continued) placed centrally and underlined. 6. Figure number should be typed **below the figure** and the table number should be typed **above the table.** 7. All figures and tables must be referred in the body of the text.  * **Table 3.1 Swing Components** * **Figure 4.1 Route Discovery**  1. Equations appearing in each Chapter or Appendix should be numbered serially, the numbering commencing a fresh for each Chapter or Appendix. 2. Thus for example, an equation appearing in Chapter 2, if it happens to be the eighth equation in that Chapter should be numbered (2.8) thus:   C(s) G1 G2  ----- = ----------------- (2.8)  R(s) 1 + G1 G2 H   1. While referring to this equation in the body of the project report, it should be referred to as Equation (2.8). |

**APPENDIX 1**

**SAMPLE ABSTRACT**

Goal of this project is to overcome the existing limitation in improving the network bandwidth for the real time multimedia networking**.// *(Goal)***

In real time system, the multimedia content is to be transmitted as a continuous stream lively and the networked multimedia face many technical challenges like high data rate over limited network bandwidth and unpredictable availability of network bandwidth. Even though it is acompressed media, still requires significantly higher bandwidth. So, it is necessary to develop such a network environment in which the real time multimedia streams can be regulated efficiently with the available network bandwidth. **//*(Problem)***

The design approach for improving the bandwidth consists of two phases. The first one is the monitor phase in which the EBS implements a shaping algorithm named Token based Leaky Bucket algorithm. Next one is the bandwidth management phase in which a scheduling algorithm named Weighted Fair Queuing (WFQ) will be implemented. // ***(Solution)***

As this EBS will schedule the traffic by sending large data streams first, the throughput increases and the available bandwidth utilization will get improved. //***(Conclusion)***

**APPENDIX 2**

**TECHNICAL PAPER PUBLICATION**

**Technical Paper Presentation – Guidelines**

A technical Paper can be broadly classified into the following parts:

* 1. Paper Title
  2. Abstract
  3. Introduction
  4. Related Work
  5. The Body
  6. Performance Experiments
  7. The Conclusions
  8. Future Work
  9. Acknowledgements
  10. References

**Paper Title:-**

Titles can be long and descriptive:

* *Linear-Time External Multipass Sorting with Approximation Guarantees*

Or short and sweet:

* *Approximate External Sort*

Here's a middle-of-the-road length, plus a cute name that sticks in people's minds:

* Floosh: *A Linear-Time Algorithm for Approximate External Sort*

**The Abstract**

State the problem, your approach and solution, and the main contributions of the paper. Include little if any background and motivation. Be factual but comprehensive. The material in the abstract should not be repeated later word for word in the paper.

**The Introduction**

The Introduction is crucially important. By the time an editor has finished the Introduction, he's probably made an initial decision about whether to accept or reject the paper -- he'll read the rest of the paper looking for evidence to support his decision. A casual reader will continue on if the Introduction captivated him, and will set the paper aside otherwise. Again, *the Introduction is crucially important.*

Here is the five-point structure for Introductions. Unless there's a good argument against it, the Introduction should consist of five paragraphs answering the following five questions:

1. *What is the problem?*
2. *Why is it interesting and important?*
3. *Why is it hard?* (E.g., why do naive approaches fail?)
4. *Why hasn't it been solved before?* (Or, what's wrong with previous proposed solutions? How does mine differ?)
5. *What are the key components of my approach and results?* Also include any specific limitations.

Then have a final paragraph or subsection: "Summary of Contributions". It should list the major contributions in bullet form, mentioning in which sections they can be found. This material doubles as an outline of the rest of the paper, saving space and eliminating redundancy.

**Related Work**

The perennial question: Should related work be covered near the beginning of the paper or near the end?

* **Beginning**, if it can be short yet detailed enough, or if it's critical to take a strong defensive stance about previous work right away. In this case Related Work can be either a subsection at the end of the Introduction, or its own Section 2.
* **End**, if it can be summarized quickly early on (in the Introduction or Preliminaries), or if sufficient comparisons require the technical content of the paper. In this case Related Work should appear just before the Conclusions, possibly in a more general section "Discussion and Related Work".

***The Body***

**Guideline #1:** A clear new important technical contribution should have been articulated by the time the reader finishes page 3 (i.e., a quarter of the way through the paper).

**Guideline #2:** Every section of the paper should tell a story. (Don't, however, fall into the common trap of telling the entire story of how you arrived at your results. Just tell the story of the results themselves.) The story should be linear, keeping the reader engaged at every step and looking forward to the next step. There should be no significant interruptions -- those can go in the Appendix; see below.

Aside from these guidelines, which apply to every paper, the structure of the body varies a lot depending on content. Important components are:

* **Running Example:** When possible, use a running example throughout the paper. It can be introduced either as a subsection at the end of the Introduction, or its own Section 2 or 3 (depending on Related Work).
* **Preliminaries:** This section, which follows the Introduction and possibly Related Work and/or Running Example, sets up notation and terminology that is not part of the technical contribution. One important function of this section is to delineate material that's not original but is needed for the paper. Be concise -- remember Guideline #1.
* **Content:** The meat of the paper includes algorithms, system descriptions, new language constructs, analyses, etc. Whenever possible use a "top-down" description: readers should be able to see where the material is going, and they should be able to skip ahead and still get the idea.

***Performance Experiments***

We could have an entire treatise on this topic alone and I am surely not the expert. Here are some random thoughts:

* Many conferences expect experiments.
* It's easy to do "hokey" or meaningless experiments, and many papers do.
* It's easy to craft experiments to show your work in its best light, and most papers do.
* What should performance experiments measure? Possibilities:
  + Pure running time
  + Sensitivity to important parameters
  + Scalability in various aspects: data size, problem complexity,
  + Others?
* What should performance experiments show? Possibilities:
  + Absolute performance (i.e., it's acceptable/usable)
  + Relative performance to naive approaches
  + Relative performance to previous approaches
  + Relative performance among different proposed approaches
  + Others?

***The Conclusions***

In general a short summarizing paragraph will do, and under no circumstances should the paragraph simply repeat material from the Abstract or Introduction. In some cases it's possible to now make the original claims more concrete, e.g., by referring to quantitative performance results.

***Future Work***

This material is important -- part of the value of a paper is showing how the work sets new research directions. I like bullet lists here. (Actually I like them in general.) A couple of things to keep in mind:

* If you're actively engaged in follow-up work, say so. E.g.: "We are currently extending the algorithm to... blah blah, and preliminary results are encouraging." This statement serves to mark your territory.
* Conversely, be aware that some researchers look to Future Work sections for research topics. My opinion is that there's nothing wrong with that -- consider it a compliment.

***The Acknowledgements***

Acknowledge anyone who contributed in any way: through discussions, feedback on drafts, implementation, etc. If in doubt about whether to include someone, include them.

**References**

List down the list of papers that you have referenced throughout your analysis.

**APPENDIX 3**

**TEST CASE TEMPLATE**

|  |  |
| --- | --- |
| Module Name: | Google login screen |
| Test Title: | Verify login with valid username and password |
| Description | Test the Google login page |
| Test Designed by | <Name> |
| Test Designed date |  |
| Test Executed by | <Name> |
| Test Executed date | <Date> |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Step | Test Case | Test Data | Expected Result | Actual Result | Status (Pass/Fail) |
| 1 | Navigate to login page |  | User should be able to login | User is navigated to  dashboard with successful  login | Pass |
| 2 | Provide valid username | User= example@gmail.com |
| 3 | Provide valid password | Password: 1234 |
| 4 | Click on Login button |  |

**APPENDIX 4**

**FORMAT FOR PREPARATION PROJECT REPORT**

1. **ARRANGEMENT OF CONTENTS**

The sequence in which the project report material should be arranged and bound as follows:

* 1. Cover Page & Title Page
  2. Bonafide Certificate
  3. Company certificate(if applicable)
  4. Abstract
  5. Acknowledgement
  6. Table of Contents
  7. List of Tables
  8. List of Figures
  9. List of Symbols, Abbreviations and Nomenclature
  10. Chapters
  11. Appendices
  12. References

The table and figures shall be introduced in the appropriate places.

1. **PAGE DIMENSION AND BINDING SPECIFICATIONS**

The dimension of the project report should be in A4 size. The project report should be bound using flexible cover of the **thick white art paper with black Calico edge**. The cover should be **printed in black letters** and the text for printing should be identical. Use executive bond papers.

1. **PROJECT REPORT SIZE**

Minimum limit: 70 Pages

Maximum limit: 90 Pages(Excluding the appendices)

The total report size should not exceed 100 pages

1. **TOTAL NUMBER OF COPIES OF PROJECT REPORT**

Individual copy : 1 report

Main library : 1 report + 1 CD

Department library : 1 report + 1 CD

Internal Guide : 1 (Optional)

CD should contain the following details (in separate files)

* + Whole report document (Both in word and pdf formats)
  + Demo(Executable version)
  + Video recording of the demo
  + Full coding
  + Slide presentations (All reviews and final viva presentation)
    - The cover of the CD shall be labeled with Project Name, Student’s name with registration numbers and batch (2021-2022). Same contents should be printed on the top of the CD with permanent marker pen.

**APPENDIX 5**

**SPECIMEN OF COVER PAGE & TITLE PAGE**

**TITLE OF PROJECT REPORT**

<Font Size 18><1.5 line spacing>

**A PROJECT REPORT**

<Font Size 14>

***Submitted by***

<Font Size 14><Italic>

**NAME OF THE CANDIDATE(S) (REG. NOs.)**

<Font Size 16>

***in partial fulfillment for the award of the degree***

***of***

<Font Size 14><1.5 line spacing><Italic>

**NAME OF THE DEGREE**

<Font Size 16>

IN

**BRANCH OF STUDY**

<Font Size 14>

**NAME OF THE COLLEGE**

<Font Size 14>

**ANNA UNIVERSITY : CHENNAI 600 025**

<Font Size 16><1.5 line spacing>

**MONTH & YEAR**<Font Size 14>

 

**PERFORMANCE ASPECTS CONSIDERATIONS OF A CLASS OF ARTIFICIAL NEURAL NETWORK**

**A PROJECT REPORT**

**Submitted by**

**GAYATHRI R (311013205007)**

**SANDHYA A (311013205055)**

***in partial fulfillment for the award of the degree***

***of***

**BACHELOR OF TECHNOLOGY**

**IN**

**INFORMATION TECHNOLOGY**

**KCG COLLEGE OF TECHNOLOGY, KARAPAKKAM**

**ANNA UNIVERSITY:CHENNAI 600 025**

**APRIL 2021**

**APPENDIX 6**

**SPECIMEN OF BONAFIDE CERTIFICATE**

**ANNA UNIVERSITY : CHENNAI 600 025**

<Font Style Times New Roman – size -18>

**BONAFIDE CERTIFICATE**

<Font Style Times New Roman – size -16>

<Font Style Times New Roman – size -14>

Certified that this project report **“……………………TITLE OF THE PROJECT……………..”** is the bonafide work of “**…………..NAME OF THE CANDIDATE(S).…………….”** who carried out the project work under my supervision.

<<Signature of the Head of the Department>> <<Signature of the Supervisor>>

<<Name>> <<Name>>

**HEAD OF THE DEPARTMENT SUPERVISOR**

<<Academic Designation>> <<Academic Designation>>

<<Department>> <<Department>>

<<Full address of the Dept& College >> <<Full address of the Dept& College >>

**ANNA UNIVERSITY : CHENNAI 600 025**

**BONAFIDE CERTIFICATE**

Certified that this project report titled **“ESTABLISHING A GROUP KEY VIA DISTRIBUTED AND COLLABORATIVE APPROACH FOR DYNAMIC PEER GROUP”** is the bonafide work of **“RAMESH S (31105104019), SURESH L (31105104020)”** who carried out the project work under my supervision.

**HEAD OF THE DEPARTMENT SUPERVISOR**

Dr. J Frank Vijay Mr. N Bhaskar

Professor Assistant Professor

Dept. of IT Dept. of IT

KCG College of Technology KCG College of Technology

Karapakkam. Karapakkam.

**Internal Examiner External Examiner**

**APPENDIX 7**

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