Assessment Brief CA 2: Literature Review in Data Science

Module: RESA C9009 - Research Process for Data Analytics
Assessment Type: Literature Review
Weighting: 30%
Word Limit: 4000 words (excluding references)
Submission Deadline: As per Moodle

Assessment Objective

The objective of this assessment is to develop your skills in conducting a literature review in the field of Data Science. You will select and critically evaluate 7–10 research papers related to Data Science from the arXiv repository and synthesize the key findings, methodologies, and contributions in a coherent and structured literature review. The literature review should encompass all aspects required for a comprehensive understanding of the chosen papers.

Task Description

1. **Paper Selection**: Choose 7–10 research papers related to Data Science from the arXiv repository. Ensure that the papers are relevant to the field and are recent (published within the last 3 years).

2. **Literature Review Structure**: Your literature review should be structured as follows:

   (a) **Introduction** (Approximately 400 words):
      - Briefly introduce the field of Data Science and its significance.
      - Provide an overview of the purpose and structure of the literature review.

   (b) **Methodology** (Approximately 400 words):
      - Describe the criteria and process you used to select the chosen papers.
      - Explain any exclusion criteria (if any) and why you selected the papers you did.

   (c) **Literature Review** (Approximately 2500 words): For each selected paper, provide a detailed review, including:
      - The title, authors, and publication date of the paper.
      - A summary of the paper's objectives and research questions.
      - An explanation of the methodology or approach used in the paper.
      - Discussion of key findings and contributions.
      - Critical evaluation of strengths and weaknesses.
      - Identification of common themes or trends across the selected papers.

   (d) **Discussion and Synthesis** (Approximately 1000 words):
      - Compare and contrast the findings and methodologies across the selected papers.
      - Identify gaps or areas of disagreement in the literature.
      - Discuss the implications of the research for the field of Data Science.

   (e) **Conclusion** (Approximately 300 words):
      - Summarize the main findings and contributions of the selected papers.
      - Highlight the key takeaways from your literature review.

   (f) **References**: Include a list of all the references used in your literature review. Follow any citation style of your choice.

Assessment Criteria

This literature review will be evaluated based on the following criteria:

1. **Clarity and Organization** (20%):

   - The overall clarity and coherence of the writing.
   - The logical organization and flow of the literature review sections.
   - Proper use of headings, subheadings, and transitions to guide the reader.

2. **Paper Selection and Justification** (20%):

   - The appropriateness and relevance of the selected papers to the field of Data Science.
   - A clear and well-justified rationale for why each paper was chosen.
   - Consideration of the recency of the papers (published within the last 3 years).

3. **Depth and Relevance of Literature Review** (20%):

   - The depth of the analysis and discussion of each selected paper.
   - The relevance of the information presented to the objectives of the literature review.
   - The extent to which the literature review covers key aspects of the selected papers.

4. **Critical Analysis and Evaluation** (20%):

   - The ability to critically analyze and evaluate the strengths and weaknesses of each selected paper.
   - A balanced and informed assessment of the contributions and limitations of the research.

5. **Synthesis and Integration** (15%):

   - The ability to synthesize and integrate findings, methodologies, and themes across the selected papers.
   - The identification of commonalities and differences in the literature.
   - The capacity to draw meaningful insights from the synthesized information.

6. **Academic Rigor and Originality** (5%):

   - Adherence to academic integrity principles, including proper citation and referencing.
   - The demonstration of original thought and analysis in the literature review.

   Note: Plagiarism guidelines must be strictly adhered to, and any form of plagiarism will result in penalties, including a potential zero for the assessment. Additionally, the use of GPT or any other automated content generation tools is not allowed for this assessment, and all content must be original and written by the student.

Submission Guidelines

- Submit your literature review as a well-organized, single PDF document.
- Ensure proper formatting, including page numbers, headings, and citations.
- Include a cover page with your name, student ID, course name, and submission date.

Note

Ensure that you adhere to academic integrity principles and properly cite all sources used in your literature review.

Feedback and Grading

Feedback on your literature review will be provided according to the assessment criteria. Grades will be assigned based on the quality of your work and your ability to demonstrate a deep understanding of the selected papers and the field of Data Science.

Submission Deadline and Late Submission Policy

All submissions for this assessment must be made by the specified deadline. It is crucial that you adhere to this deadline to ensure fair and consistent evaluation. Late submissions will be subject to the DkIT late submission policy (Continuous Assessment Procedures).

Late Submission Policy:

DkIT has a clear late submission policy in place. This policy outlines the consequences and penalties for late submissions. Late submissions may result in the following consequences:

- **Grade Penalties**: Marks may be deducted from your assessment for each day of delay.

- **Zero Mark**: In severe cases of delay, your assessment may receive a zero mark.

- **Impact on Progression**: Repeated late submissions can have a negative impact on your overall progression in the course or program.

To avoid these consequences, we strongly advise you to plan your work and time effectively to ensure timely submission. If you encounter any exceptional circumstances that may affect your ability to submit your assessment on time, please contact the me as soon as possible to discuss potential extensions or accommodations.

It is your responsibility to manage your time effectively and submit your work on or before the specified deadline. Please take this matter seriously to avoid any unnecessary academic penalties.

Coversheet

Word format is provided on the Moodle. Please include in your CA.