Assignment 4

SE3080 – SPM   **Semester 2**

➢ Write a research paper based on the proposed or developed system.

➢ The research paper should be written in **your own words**. It must **not** include **material directly copied from elsewhere** except where it is presented as a 'quote'. The ideas, information, data, diagrams, or tables taken from different sources must be acknowledged by using the **IEEE referencing style**.

➢ Submitted research papers will be checked for plagiarism using a plagiarism tool. Accordingly, papers with a **similarity score greater than 20%** will be considered plagiarized, and **no marks** will be given for the assessment. No excuses will be considered.

➢ The research paper **must contain** the main sections given below. However, you are free to add any additional sections:

- **Abstract :**
  o An abstract is a teaser designed to convince the reader to read the entire research paper. It should give a **quick overview of the research paper**, allowing readers to decide if it will likely meet their needs and is worth their time to read the rest. Thus, an **abstract is a highly crucial part** of a research paper.

  o Since there is a limitation of words, you should know how to describe your research concisely. You have no choice but to find a way to summarize your paper in the fewest words possible.

  o Although this is the first topic, **start writing the abstract once you have completed all the other parts of the research paper**. Then you will be able to give a much more accurate summary.

- **Introduction :**
  o In this section, you should provide a strong foundation about the research by addressing the following:
    ▪ **Background**: Provide a brief and relevant background of the topic being studied, including relevant theories, concepts, and previous research.

    ▪ **Problem statement**: Clearly and concisely state the research problem that the study aims to address. It should be specific, focused, and convey the purpose of the research.

    ▪ **Significance**: Explain the significance of the problem and why it is important to address it. This can include a discussion of the practical or theoretical implications of the study. It is important to present a compelling argument for the significance of the research.

    ▪ **Objectives**: State the specific objectives or aims of the study. These should be clear and specific. The objectives should be related to the significance of the research.

    ▪ **Hypotheses or research questions**: State the hypotheses (if applicable) or research questions that will be tested in the study. These should be clear and concise and should be aligned with the specific objectives of the study.

    ▪ **Summary of paper content** : Provide a brief description about the rest of the sections of the paper.

- **Related Work/Literature Review**:
  - This section highlights the work done by others which ties in with your work. It may be work that you are basing your work off from, or work that shows others attempts to solve the same problem.
  - In addition to explaining the contributions of the research paper(s) referenced to decide on the project topic, discuss the contributions of other relevant studies related to your work in this section.

- **Methodology**:
  - This section is important because it provides a clear and transparent explanation of how the study was conducted.
  - When writing this section, try to use tables, figures, and flow charts wherever possible and explain the techniques and approaches used, so that it can be easily understood by any person who reads the paper.
  - If any experiments or case studies were conducted to validate the effectiveness of the research outcomes, mention them also in this section.

- **Results**:
  - In this section, you should present the results or finding of your study, including any correlations or other relationships you identified.
  - You should also include any relevant statistical analyses or visualizations to help illustrate your findings.

- **Discussion**:
  - In this section, you should interpret your results and discuss their implications.
  - You might also discuss any limitations or challenges in your study.

- **Conclusion**:
  - In this section, you should summarize the key findings of your study and offer some concluding thoughts.
  - You could also provide recommendations for future research directions that could build on your findings.

- **References**:
  - This section should list all the research papers that were referred to when deciding on the project topic, as well as any other subsequent sources.
  - The more references you include, the better it would be. Hence, make sure to include **at least 10 references**.

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Other Details

Research Paper Submission Deadline for Journal(s) and Conference(s)	20 September 2023 **Note** : To confirm submission to journals and conferences, each group is required to create a PDF file containing screenshots of the submissions and upload it to the designated link (which is named after the allocated assessor) available in the CourseWeb module page. The PDF file should be titled with the group number (E.g. - GRP_01).
Assessed Areas	Each research paper will be evaluated based on its quality, originality, and significance.
Method of Submission	Details regarding the submission method will be provided through a notice on the Course Web.
Method of Evaluation	Evaluation will be conducted through presentations and a viva session. However, groups that managed to get their research papers **published** in a journal or conference, will be exempted from presenting their work at the final presentation and participating in the viva session.
Allocation of Marks	The assignment carries a total of 30 marks, with 10 marks designated for the progress presentations. The remaining 20 marks for the viva and final presentation will be distributed as follows:

Status of the research paper	Viva (Out of 12)	Final Presentation (Out of 8)	Additional marks given for final exam (Out of 100)
Published in a journal or conference	12	8	25
Accepted by a journal or conference, and addressed the comments given by reviewers	9	Will be based on the performance at the evaluation	Will be based on the performance at the evaluation
Unable to get the research paper published or accepted	Will be based on the performance at the evaluation	Will be based on the performance at the evaluation	0

Authors	Names of group members, name of the assigned assessor, and name of the lecturer-in-charge (D. I. De Silva)	**Note**: • You are **free** to decide on the **order** of the author list • Each group will be allocated an assessor to check the **overall structure** and **grammar** of the research paper. Hence, make sure to get your paper checked by the allocated assessor **before** submitting it to a journal or conference.