ICT1002 Programming Fundamentals

Python Team Project

Submission Guide

Marking Criteria and Rubrics

AY2021/2022 Trimester 1

Timeline and Deliverables

Middle report submission	Sunday 17 Oct 2021 11:30pm
Report submission deadline	Monday 25 Oct 2021 9:00am
Presentation/demo Video submission deadline	Friday 29 Oct 2021 11:30pm
Source code submission deadline	Friday 29 Oct 2021 11:30pm
Peer evaluation deadline	Friday 5 Nov 2020 11:30pm

Report Preparation/submission Instruction:

How to submit?

- Submit your final report in xSITE Dropbox ('Python Project Submission') in a **word .doc** file **NOT a PDF**.

Preliminary report and final report:

- You need to submit a middle report for the markers to understand your project and may provide your feedback if needed. You may have a proper project definition, and the tasks you are developing, and all the results you have completed already. Note that it is okay your preliminary result is incomplete, and some sections will be having more content in the final report. You can continue to work on your preliminary report after submission. Limited to 6 pages excluding the references and appendix.
- Final report is the final report that you need to submit as your project results in more detail outcome/results. Limited to 8 pages excluding the references and appendix.

Report format:

- To allow you to better prepare the report, you can use the provided report template, which is IEEE template for any report/paper writing. You have to strictly follow the template to prepare your report.
- Title and team information: In the first page, you shall provide your project title, and team and members information including team ID, team member name, student ID and emails.
- Abstract: A summary of your project including, the problem you investigated or the purpose, your proposed approach/method and your major findings including key quantitative results and interpretations.
- Introduction: Write down the detail context of your project, state the purpose of the work of your project in the form of question or problem your project investigated; Briefly explain your rationale and approach you used, and the outcome/results/conclusion of your project.
- Related works or Literature: In this section, you need to provide a brief related works with citations. Discuss with citations whether there are any of other papers/tools/systems addressed the similar/same problem and what are the difference between yours and theirs. Any other related information etc.
- Methods: In this section, you can write down the detail approach/method/implementation of your project. This may include the below information:
    - Dataset used: introduce the detail dataset you used

- System diagram: A diagram includes the main component/technology of your project. Each component of the diagram can be introduced with details in the below sections.
- Data pre-processing: introduce the detail about how you pre-process your data in order to analyze them.
- Data analysis: you need to list all the analyses tasks that you performed in your project. And write down the very detailed algorithms or approach that you did, the rationale of doing that and proper discussion and explanation.
- Result and Insight: You must write down the results, outcomes and insight by analyzing the data. You may wish to add proper Tables and Figures to show your result/insight with proper and detailed interpretations and discussion. The discussion is used to interpret your results in light of what was found from the data analysis, and explain the new understanding of the problem after taking your results into consideration.
- Conclusion: Write down a concise conclusion to summary your whole project with potential interesting future work. List the detailed task allocation and the contributions of each team members. Reflections etc.
- References: put down all references including the papers you cited or URLs you used in the project.
- Appendix: In your appendix, you can add in more information, results, screenshots and so on if needed.

Bonus: If your team produces good project outcomes, your project may be selected for publication and presentation in an international/national conference such as Soli 2021 (https://2021.ieee-soli.org/) or others. This will add good value to your CVs. We will work together with your team on the submission of the paper. SIT is going to pay for your conference registration and publication fee.

Late Submission

A penalty of 20% per day for each deliverable will be imposed for late submission unless extension has been granted prior to the submission date. Request for extension will be granted on a case-by-case basis. Any work submitted more than 4 days after the submission date will not be accepted and no mark will be awarded.

Plagiarism

SIT's policy on copying does not allow you to copy software as well as your assessment solutions from another person. It is not acceptable to copy other person's work. It is the students' responsibility to guarantee that their assessment solutions are their own work. Meanwhile, you must also ensure that others don't obtain access to your work. Where such plagiarism is detected, both assessments involved will receive ZERO mark.

Assessment criteria

Your assignment will be assessed according to the criteria listed in the mark scheme in Table 1.

	Excellent (A)	Good (B)	Average (C, D)	Fail to meet expectations (E, F)
Report Writing (30%)	Report is clear and logical. Excellent coverage and structure with clarity of explanation and details. Methods, analysis, results, conclusions are clearly stated. Implications of results and analysis are discussed.	Report is generally clear, mostly good report with explanation and details, some minor errors and ambiguities. Clear description of methods and some discussion of the results with some conclusions.	Report is unclear with less structure. Report organization is not well thought out. Partial explanation of methods and results, some errors and ambiguities. Some discussion of the results, little or no conclusions.	Report is very confusing and unclear. Brief and minimal report with little explanation and details. Nothing much done.
Video Presentation, Demo(15%)	Presentation and demo are clear and logical. Excellent coverage and structure with clarity of explanation and details.	Presentation and demo are generally clear, mostly good report with explanation and details, some minor errors and ambiguities.	Presentation and demo are unclear with less structure. Report organization is not well thought out. Partial explanation of methods and results, some errors and ambiguities.	Presentation and demo are very confusing and unclear.
Project Quality and Implementation (35%)	Interesting, innovative, accurate and useful analysis and features. Appropriate & sufficient data sources are collected/used for the data analytics tasks. Significant implementation to data analytics accuracy, appropriate choice of toolkits/API, algorithms and or complete implementation of modules. Excellent coding quality.	Minimum suitable datasets are collected/used for the analysis. Appropriate and useful analysis tasks are performed. Good implementation to support features/use cases, appropriate choice of toolkits/API for the working demo. Well tested and working. Good coding quality.	Very few features or use cases supported. Insufficient or inappropriate data sources are used. Implementations are not always justified. The analysis did not come out with much useful information. Minor implementation for the sake of analysis tasks, limited features, may not work completely. Codes with some bad practices.	Total copy of existing idea, or nothing much done. Few features or use cases. Total copy of existing code, very little implementation or nothing much done. Codes are wrongly implemented.
Experiment Evaluation and Insight Discussion (20%)	Experiments are well designed, and documented. Good interpretation of results and conclusions. Results and conclusions are clearly stated with further implications. Limitations may be stated too. Very interesting insight was identified. Evaluation and insights are clearly documented. Evaluation results and conclusions clearly stated and justified with suitable reasons and implications, solutions are designed and stated.	Appropriate choice of experiments. Results and conclusions are clearly stated, some further implications given. Some good interpretations and conclusions. Interesting insight was identified. Evaluation and insights are documented. Results and conclusions are stated, some good reasoning and conclusions with solutions.	Experiments not always clearly documented. Some partially correct interpretations, results and conclusions. Limited insight was identified. Evaluation and insight are not completely documented. Not all results and conclusions are stated, partial conclusions and solutions.	Hasty, poor or very basic experiments done. Experiments not clearly documented. Few, wrong or no conclusions. Hasty, poor or very basic evaluations done. Evaluation not clearly documented. Few, wrong or no insights.
Peer Appraisal	Peer assigned delta based on contribution to the team project			

* Extra bonus marks will be given for innovative algorithms which can outperform the state-of-the-art algorithms via benchmarking and experimental comparison. To do so, you may need to implement multiple algorithms and perform comparisons.