[Project Title]

Final Report



Information Technology Capstone Project

COMP5703/5707/5708

Group Members

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Abstract

The abstract should be between 150-600 words. Briefly summarise your project/research. The abstract is usually written last, when you have a clear idea of your project as a whole. The aim of this section is to quickly introduce the reader to the project, and ideally engage their interest and encourage them to read the rest of the proposal. You should include an overview of the project, its motivation, the objectives, and the methods you have used, and discussions and findings. Do not include details in this section , you will have plenty of space in later sections. Also remember that the reader may not understand the technical details of your project so avoid jargon and leave in-depth discussion for later sections.

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| Note: The final report has a similar structure to the proposal and it is acceptable to reuse material from the proposal. For example, if your literature review perfectly covered all the relevant material then there is no need to update. More likely, you will need minor revisions to add new material your discovered during the project. |

# Introduction

In this section you will describe the context of your proposal. You will introduce the general background knowledge needed to understand the research topic (as it relates to your proposal), the motivation for your project, and the benefits that may be provided by addressing the research question. This should enable a clear and concise description of the problem that your proposal addresses. Write in a way that people or reader who does not have the same background will be able to follow or understand. No technical information is needed to be described in this section.

# Related Literature

Describe in detail the related knowledge needed to understand your work and how it relates to existing work. This may take the form of a literature review, or a review of related projects.

## Literature Review

A literature review is done by analysing and articulating the published sources and literature on the specific topic of the project. In this section, you should emphasise the review is needed and why the selected topic is essential for the project. Moreover, the scope of the literature reviewed and the selection criteria, such as the type of sources, keyword and any particular date range, need to be specified.

The literature reviewed can be in the form of an article such as conference paper, journal paper, a research report or thesis. The literature review usually consists of three main components: an introduction, a body and a conclusion. Furthermore, the literature review is not only summaries one by one of the source. Instead, it constructs an essay that flows from one topic to another that relates to the project problem that is to be solved.

For this type of project, the expectation of the literature to support the argument is at least 10 – 15 citations that compile state of the art discussion related to the problem of the project. Do not forget to consider the reliability of the sources.

# Research/Project Problems

Clearly state the problem or question the project intends to investigate. Describe the scope of your project since it may not be feasible to completely solve the problem. State the objectives and how completion will be measured.

## Research/Project Aims & Objectives

In this section, the aims and objectives of the project associated with the research question or problem should be explained in detail.

## Research/Project Questions

In this section, an apparent problem or question faced by the client needs to be defined and stated. Sometimes, even though the client already stated their problem it might be only the symptoms.

## Research/Project Scope

In many cases, the problem might be too big to be solved. The scope needs to be stated in this section to make it easier to justify the outcome or the completion of the project.

# Methodologies

Depending on the nature of your project, the methodologies adopted will be different.

**IS projects**: In this section, the group/student should explain the methodology that will be used to solve the problem or problems at the core of the project. The methodology section should explain and inform the reader as to how data was collected, how the IT artefact is developed and tested and so forth. You should explain the reasons why you chose a particular technique and procedure for your project. By providing sufficient information in your report you will allow others to replicate your methodology. Moreover, the appropriate sample size also needs to be considered in order to ensure a statistically rigorous recommendations based on your findings.

**SW Development**: Describe the methods you will use to solve the problem you are addressing, such as the SDLC methodology adopted, for example Agile. Explain how data is collected, the techniques used to analyse data, the models chosen, and how accuracy of analysis was determined. You should explain the reasons why you chose a particular technique and procedure for your project. You should also include how you intend to deploy the system to your clients as well as the testing processes involved.

**Data Science project**s: Describe the methods you will use to solve the problem you are addressing. Explain how data is collected, the techniques used to analyse data, the models chosen, and how accuracy of analysis was determined. You should explain the reasons why you chose a particular technique and procedure for your project.

For software development project, include additonal sections where appropriate.

## Methods

Describe the methods you will use to solve the problem you are addressing.

## Data Collection

Explain how data is collected.

## Data Analysis

Explain the techniques used to analyse data

## Deployment

**SW projects**: Explain the deployment of the system on client’s infrastructure. Remember to mention how updates and bug fixes will be distributed after the deployment.

## Testing

**SW projects**: Include the detailed description of your testing process and methodologies. Examples include: Test Driven Development (TDD), Unit Testing, Integration Testing, vigorous testing, etc. Remember to explain why the methodology was chosen and how the defined testing process will contribute to the quality software development in your specific project.

# Resources

Indicate the resources that will be required to complete your projects. Depending on the nature of the project, include sections where appropriate.

## Hardware & Software

**SW Projects**: List the hardware that the proposed software will be compatible with and which it will be able to run on. For example: “The software will run on 32bit and 64bit Windows desktop systems from Windows XP to Windows 10.” or “The software will run on Java which can be implemented in a virtual environment on all major operating systems (Windows, Mac and Linux) on all modern hardware architectures (iPhones and Android smartphones).” List all software technologies that will be used in the development of the proposed software as well as all software that will be integrated with the system, for each one explain why it was chosen.

**IS/Data Science Projects**: List the software tools that will be used in the project.

## Materials

**SW/IS/Data Science projects**: List other resources you will need to complete your project

## Roles & Responsibilities

In this section, the detail of responsibilities of each member of the team should be defined, such as who did what? Each member can have more than one role, depending on the nature of the project.

# Milestones / Schedule

**Data Science projects**: List the expected milestones. There should be sufficient detail to be able to measure progress and completion. Describe the planned timeline for the work you intend to do. A Gantt chart is ideal for illustrating the plan and where the milestones fit in.

**IS projects**: Within the allocated time, the detail of how the project will be running should be described in detail in this section. A Gantt Chart might be used to show and illustrate the milestone of your project.

**SW Development projects**: Describe the planned timeline for the work you intend to do. You can follow the common stages mentioned below as a guide to list the tasks required.

* Analysis
* Development
* Testing
* Deployment
* Training and documentation

You can use the example below of a project plan or create your own Gantt chart to detail the breakdown of tasks.

|  |  |  |  |
| --- | --- | --- | --- |
| 1. **Milestone** | **Tasks** | **Reporting** | **Date** |
| Week-1 | Analysis and design stage, gather data and create system mockup | Client meeting to review the project | 11-03-2018 |
| Week-2 | Architecture design | Client meeting to review the work plan | …… |
| Week-3 | Design work plan | None |  |
| Week-4 | Create database | None |  |
| Week-5 | Proposal Report Due |  |  |
| Week-6 | Create GUI | Client meeting to review GUI |  |
| Week-7 | Integration with iPhone environment | None |  |
| Week-8 | Testing | None |  |
| Week-9 | Progress Report Due |  |  |
| Week-10 | Deployment | Client meeting to deploy the system |  |
| Week-11 | Documentation |  |  |
| Week-12 | Final Presentation |  |  |
| Week-13 | Final Report (thesis) |  |  |

# Results

**DS projects**: Results/Outcomes of your project. This should be a factual description of the experimental results or data analysis, illustrated with relevant figures. Include any information needed to interpret your results. Describe any challeges that affected the results. Interpreting the results can be left for the discussion section.

**IS/SW development projects**: If your project is developing a prototype as a tool to solve the problem, then describe the nature of the prototype system that your team is building. Describe how the IT artefact (prototype) was developed and how it was demonstrated to the client. Explain the method(s) of design, development, testing, evaluation and analysis that was employed to show that your propose prototype is what the client expected.

If your project uses an available IT tool, then you should describe and report why that tool has been selected and the nature of data that your team is collected. Explain how the team collected this data. Also, you should report the purpose of collecting this data. Finally, report the method(s) of data analysis that were employed to analyse the collected data to interpret the findings.The project deliverables should be stated and described in this section. Discuss the implications of completing your project. The implications could affect the client (e.g. in term of business process, decision making and so forth), the domain of knowledge or general audience.

# Discussion

In this section, discuss the results, implications and significance of your project contributions. The implication should be explained in more detail in the final report than your initial proposal. This section is also where you state how your findings contribute to existing gaps in the field or recommendations – practical suggestions to implementation of findings/outcomes.

# Limitations and Future Works

Describe the limitations of your project and make suggestions for future works. For example of project limitations can be the number or quality of data, participants, time constraint, platform constraints and so forth. Future work can be extensions that go beyond the limitations of your project, or be based on the wider implications of your project.

References

American Psychological Association (APA). (2010). *Publication Manual of the American Psychological Association* (6th Ed.). Washington, DC: Author.

* You are strongly encouraged to use information from reputable websites such as Wall Street Journal, New York Times, and websites from Governments, as well as books, academic journals and magazines (e.g., The Economist). Some well-regarded journals you may refer to are: Harvard Business Review, Information Systems Research, Management Science and MIS Quarterly.
* Please cite all references at the end of your paper (both proposal and final report). You should include references to facts, figures and any other information that you obtained from various sources. References from relevant papers in the University Digital Library are preferred over Internet sources as Internet sources may not always be reliable.
* Whenever you quote, paraphrase, summarise or refer to ideas, facts, figures or findings from another source (e.g. research paper, book, website), you should cite the source, with appropriate formatting, in the sentence that mentions these ideas or figures. It is not sufficient to just provide a list of references at the end of your paper. The source that you use should be cited in the text of your paper, either in parentheses or as part of the text itself. We suggest the use of APA style for referencing. If the references quite a lot, you can use the reference management system such as Endnote that provided by the University of Sydney (<http://libguides.library.usyd.edu.au/endnote)>.
* You are reminded that the University takes plagiarism infringements seriously. If the sources are not cited correctly, it may be deemed as plagiarism. Please note that your submission will be forwarded to an automated plagiarism checking system.