**IT 7993 Project Solution Report Guide**

Dr. Lei Li

**General Instructions:**

By the end of the semester, a project team is expected to submit solution report to the project stakeholder. The solution report is a document to project stakeholders which includes problem statement and analysis, as well as solution design and development. The project team will gradually build up its solution report at each milestone.

There are two types of the solution reports and each type has different requirement. Please see the section below on detailed instructions.

# General Formatting Requirements:

The cover sheet/reports should be saved in MS Word or PDF format. Times New Roman font, 12pt, single spaced. The documents should be professionally formatted and free of grammar and spelling errors.

# Detailed Instructions:

There are general two types of capstone projects: development based, and research based. The solution report requirement for each type of projects is different and is listed as follows.

* 1. **Requirement for development-based project solution report**

1. *A title page* - project name, project information website, team members, affiliation, and date.
2. *An executive summary* – high level overview of the project (what’s the problem, why it’s important, and what your team has done). Limit this section to 200 to 400 words.
3. *Project presentation* – a) Youtube link to project formal presentation; b) Youtube link to project short video; c) Youtube link to poster presentation (if applicable)
4. *Introduction* - describe the context and goals of this project, including business and technical backgrounds. Try not to exceed 2 pages.
   1. Business and project background including business information, context, problems, and the general goal – what’s the problem to solve and why it’s important?
   2. Specific project scope, objectives, and deliverables – overview of the project requirement and plan.
5. *Analysis and Design* – analysis of the problem and solution design. Try not to exceed 4 pages.
   1. Technical background - explanation of the technical environment, including major relevant concepts, practices, technologies, and products, etc.
   2. System design – system/technical architecture (use diagrams to illustrate the architecture if possible), system flowchart, major components/features of the system (overview), coding and testing plans, documentation consideration (e.g., user manuals), etc.
6. *Implementation –* how the design being implemented. Try not to exceed 6 pages.
   1. Summary of the implementation – development environment, coding and testing.
   2. Major features of the system – use screen shots to illustrate the main feature of the system.
7. *Conclusion* – summarize the project and discuss the future directions.
   1. Project summary - assessment of project outcomes (general and by objectives and deliverables): how successful is this project? Have you achieved the original goals? Please provide detailed description and explanation of each.
   2. Limitations and future direction – what are the limitations? What could be improved in the future?
8. *Reference* – list any references used in the report using APA format.
9. *Appendix* – Any documentation/information needs to be attached to this report. Only include highly relevant one. Other documentation could be included in the package as separate files.
   1. **Requirement for research-based project solution report**
10. *A title page* - project name, project information website, team members, affiliation, and date.
11. *An executive summary* – high level overview of the project (what’s the problem, why it’s important, and what your team has done). Limit this section to 200 to 400 words.
12. *Project presentation* – a) Youtube link to project formal presentation; b) Youtube link to project short video; c) Youtube link to poster presentation (if applicable)
13. *Introduction* - describe the context and goals of this project, including business background. Try not to exceed 2 pages.
    1. Business and project background including business information, context, problems, and the general goal – what’s the problem to solve and why it’s important?
    2. Specific project scope, objectives, and deliverables – overview of the project requirement and plan.
14. *Related studies –* what others have done? Try not to exceed 3 pages.
    1. What other people/organizations done in the problem domain?
    2. Industrial standards/practices used in the project (if applicable).
15. *Research method* – analysis of the problem and solution design. Try not to exceed 3 pages.
    1. Describe the methodology used in this project (e.g., interview, survey) and explain why it’s appropriate.
    2. Research design – describe your research design in detail. For example, if survey is used as method, research design could include, i) development survey instrument; ii) identification of survey participants; iii) distribution of the survey; iv) methods for analyzing the survey results.
16. *Research finding –* present the results of your research. Try not to exceed 6 pages.
    1. Summary of implementation – an overview of the how the research design being implemented.
    2. Present the research findings from analysis of the related studies, results of survey/interviews/evaluations, etc.
17. *Conclusion* – summarize the project and discuss the future directions.
    1. Project summary - assessment of project outcomes (general and by objectives and deliverables): how successful is this project? Have you achieved the original goals? Please provide detailed description and explanation of each.
    2. Limitations and future direction – what are the limitations? What could be improved in the future?
18. *Reference* – list any references used in the report using APA format.
19. *Appendix* – Any documentation/information needs to be attached to this report. Only include highly relevant one. For example, is survey instrument/interview questions could be included. Other documentation could be included in the package as separate files.