CS486C – Senior Capstone Design in Computer Science

Project Description

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| **Project Title:**  [insert your title here] |
| **Sponsor Information:** (optional: insert small logo here if you like. Nice touch!) | Your name, your title/roleName of your group within organization, if applicableName of your company/organizationYour email<repeat if there are multiple persons sponsoring> |

# Project Overview:

Insert project description here. This is the most important part! You generally want between 1-2 pages for the project description, to hit a total document length of 2-3 pages. Much less, and you’re probably missing vital detail to understand clearly what you want; much more, and you’re going overboard and adding very detailed requirements that just obscure the project idea.

You want to present a coherent “story” that hooks the reader and builds interest in doing your project. See it as a “sales pitch” aimed at convincing students that this is an exciting project to work on. Here’s an outline of how the story should “flow”:

1. **Why should I care:**  start with an overall “big picture” paragraph introducing the area, in general, and convince that it’s important: time, money, safety, etc. . The aim is to connect to something most readers know and care about…before we get to details.
2. **Who are you, what are you doing, overall work activity:**  Now introduce yourself/company: what sub-area within the big picture you just set up are you working in? Briefly say what does your company does overall and how do you do it.
3. **The problem:**  Having outlined what you do, now describe what particular problem you have in that work process that needs solving/fixing/improving. If there are a number of shortcomings, you could bullet them out. What are the current consequences of not having this fixed?
4. **Solution overview:** Now for the real meat: introduce your general vision for a solution. “What we envision to address the above shortcomings is…”. First outline the solution in 1-2 general sentences, i.e., are we building a web app? A mobile app? A desktop app? Then…
5. **Details: A few key features of solution:**  Now get into some details: Provide a bulleted list of at least five key features your solution would have. “Some key features will include: “ Don’t get too detailed here (the team will do that with you during the Requirements and Design phase), just outline a few of the main functionalities you expect to see. If you have MANY features in mind, a great idea is to group them to clarify your priorities: Separate your feature list into “Minimum viable product: <feature bullets>”; then maybe “A useful system: <additional feature bullets>; and finally “Stretch goals” with bulleted optional advanced features. Again, keep in mind that you don’t have to hit \*every\* feature here…just enough to clarify some key functionalities you’ll want.
6. **Impact of successful product:**  close with a few lines on who will use this product and what the impact will be. Students like to feel that they are working on something that people will use and appreciate.

Bonus Eye candy: Now that you have written up the prose, think about adding an image or two to add visual appeal. It can be a sample of data graph, a shot of the equipment you use, or even just an icon or image to spice things up. Embed it in the text somewhere close to where it’s mentioned, or top-right if it has no particular place.

To see the above points illustrated, have a look at the following two previous project descriptions that I’ve marked up to highlight what each of the above elements could look like in practice at:

<https://www.ceias.nau.edu/cs/CS_Capstone/sponsor_site/ProjectDescr-example1.pdf>

<https://www.ceias.nau.edu/cs/CS_Capstone/sponsor_site/ProjectDescr-example2.pdf>

# Knowledge, skills, and expertise required for this project:

Just bullet out some skills that you think the team will need here. No need to be perfect here, and I can help adjust these when I review your description.

# Equipment Requirements:

Just bullet out any particular equipment required. Usually, this is pretty standard, so just add to/edit the following bullet if you have special equipment needs the team show know about. Here is a standard bullet that works for most projects; feel free to remove/add.

* There should be no equipment or software required other than a development platform and software/tools freely available online.

# Software and other Deliverables:

Here you just list out the main deliverables that you will expect. Again, tons of detail isn’t required; you just want to let the team knows what kinds of things, in general, you’ll expect at the end. I’ve given you a few boilerplate items to start…please add the deliverables you’ll expect that are specific to your project.

* A strong as-built report detailing the design and implementation of the product in a complete, clear and professional manner. This document should provide a strong basis for future development of the product.
* Complete professionally-documented codebase, delivered both as a repository in GitHub, BitBucket, or some other version control repository; and as a physical archive on a USB drive.