Project Elective CS/DS 901

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Agenda

- Expectations
- Philosophy and Style of Working
- Goal Statement
- Meetings

Expectations

- ☞ A PE is also a 4-credit course, which means 8 hours or more of work per week on average.
- ☞ Building a good software artifact also requires a lot of hard work.
- ☞ There is not much scope to slack off and catch up at the end.

Philosophy and Style of Working

- You will be frequently confronted with technical and other challenges that you have never faced before, and cutting-edge software and techniques are (by definition) poorly documented.
- Need to adopt "good farmer sense" (*gezond boer verstand*) as the working philosophy.
- Your job is to make progress in a macro sense given your overall objective, not so much to become a specialist in some minute topic.

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Philosophy and Style of Working—cont'd

- ☞ Proper source code management using Git (or, at your choice, another versioning system like SVN or CVS) is mandatory from the outset. Code may be hosted on GitHub, SourceForge, or similar.
- ☞ Use an appropriate software license (like GNU GPL, Berkeley, etc.) explicitly for your code.
- ☞ Take care not to infringe on any commercial trademarks.

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Philosophy and Style of Working—cont'd

- ☞ It is recommended that a cloud platform (e.g., Amazon AWS, Microsoft Azure, Google Cloud) be used for running code (especially in cases where builds and runs take a long time).
- ☞ Try to look up what tools, libraries, etc., are already available and use them, rather than building everything from scratch.
- ☞ Avoid unnecessary friction and disagreements; each team member is responsible for the team's performance, and will additionally be judged on their own.

Goal Statement

- The first deliverable for each project is a *goal statement*, which is similar to but not exactly the same as a "software requirements specification" (SRS) document.
- A first draft of the goal statement is due on January 10, and the final, accepted version must be submitted by January 17.
- The goal statement, as the name suggests, defines the project's final outcomes, as well as the manner in which the same is planned to be achieved. It must thus be written carefully.

Goal Statement—cont'd

The goal statement must broadly cover the following aspects:

- ☞ Goal: What is the goal of the project? (Precisely what software artifacts will be created, what simulations will be run, etc.?)
- ☞ Gap Analysis: What is the gap between the current state of the art, and what the project aims to accomplish? (What is the novelty in the work proposed?)
- ☞ Architecture: What is the structure of the artifact(s) to be created in the project? (This is typically given by some block diagram, UML diagram, etc.)

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Goal Statement—cont'd

- ☞ Tools and Technologies: What tools and technologies (programming language(s), libraries, tool-chains, cloud platforms, etc.) will be used in the project, and in what way?
- ☞ Milestones: What is the schedule of the project? (Describe clearly some 6–10 sub-goals on the way to final project completion, and indicate their proposed dates of completion.)

Meetings

- There will be a regularly-scheduled meeting with all the project teams every Wednesday afternoon.
- All teams must make it to the meeting every week, without fail. All team members must come to each meeting, as well.
- Students and teams will be assessed (for final grades) on meeting attendance and participation.
- Meetings outside this regular routine will seldom happen, and only for truly exceptional reasons.

Meetings—cont'd

- ☞ Each team must have a significant update during each weekly meeting.
- ☞ Each team must also maintain a Wiki or blog (e.g., on PBworks, or on LMS itself), and make weekly status updates on the progress made.