Replace instruction (in italic style),
*You copy this document and share it openly so that **everyone** with the link can comment, not just within the organisation.*

Student Project Proposal (SPP)

This document is intended to guide students to describe their SPPs for the 2dv50e course so that course management gets an idea of if it is suitable, or not. It should also guide the assignment of supervisors. This is not a contract, what you write here will most probably change.

We want to have projects that are:

- *Clearly and precisely defined, that can be understood.*
    - *Written in English*
    - *Spellcheck and check grammar.*
    - *Proofread it! Read it aloud to check your language.*
    - *Let another human read it.*
    - *Practice your pitch to several people and ask them to explain your project back to you afterwards.*
    - *Watch out for prepositions.*
- *Projects within Computer Science*
    - *Builds on previous research (Related Work) within computer science.*
    - *It's research questions are interesting to the CS community*
- *Realistic and manageable projects*
    - *Can be done by one/two students within the timeframe of the thesis*
    - *Work to reduced risk of failure*
    - *Access to resources needed*
- *Meaningful and motivated*
    - *contribution to research*
    - *contribution to society*
    - *ethically motivated*
    - *has a target audience*
- *Suitable for your program profile*
    - *builds on courses you have taken*

Your name(s):

LNU Supervisor:

Name[s] of supervisor

Supervision status according to student
Check one of these:
[ ] Currently working with (Ongoing project)
[ ] Agreed but not started
[ ] Wish to work with (or unclear of status)
[ ] No preference, help me find one

Cooperative partners (Optional):

Name the company or if you have a partner that you work with, or intend to work with. Also, note your status in that contact. For example ("had two meetings, agreed to work together").

Preliminary Title:

Write a preliminary title. This title may change.

Elevator pitch:

Write this last… since its a summary of the rest.

Describe with one or two sentences the background, how the world is today, try to find support with at least one reference. Describe what is the challenge in this background. Describe what the project is intending to do about it. Describe how the effort is going to be evaluated.

- *Background (this may be both application and research area)*
- *Challenge (describe why the background is problematic or needs to change), here we prefer research area since it makes it easier to motivate your work.*
- *Action: What you intend to do about it.*
- *Evaluation: How you intend to evaluate what you intend to do about it (<- must be DV)*

Example
Feedback is important for learning[1]. Students learn programming at home during Covid. Students learning on their own lack synchronous and supportive feedback from their teachers[2]. I intend to deploy an existing automated programming tutor[3] in my 1dv610 class. I'm going to interview my students to see if they were supported by the automated feedback.

Iterate on this story so that this alone describes the gist of your idea and make sure it is within computer science. Try to get a few references in the background part. This is also copy pasted into the submission form to provide a base for finding a supervisor.

Steps/Milestones/Actions

Outline your work by breaking it down into separate actions or milestones. aim for around 4-8 items. This is to get an idea of what is included in your project. Make sure each item is reasonable.

Risks

Describe what you believe are the biggest risks or problems with this idea and how you intend to mitigate them. For example lack of access to data, people, or other factors.

The longer story:

This section should be a maximum of two pages not including the list of references. Keep the sub-headings (eg. Background*) but remove the instructions.*

Background and Motivations

Description of the background of the research and the application areas of your work.

Define both application area and research area. Think ***funnel*** *so go from broad to specific (as discussed during Workshop 1).*
Application areas = areas outside of CS that CS is applied to.
Research area = area within CS that you do a knowledge contribution to.

Use references especially on the CS parts.

Describe the current knowledge or state and describe why a change or new knowledge is needed. Motivate from a societal OR economic OR ethical points of view.

Think of what is the ***target group*** *for your thesis? Try to make this as wide as possible and this target group must be within computer science community. Also make sure it is beyond a specific target (such as a company).*

If you are going to develop something (eg. prototype, app, web app, …) then describe the closest solutions. If there are many have a table. You can show the important features.

Related work

*Position yourself in a research area **within Computer Science** according to instructions given during workshop. So in this section you only focus on CS!!!*

Minimum two articles published in CS conferences or journals. However do make sure you find the important and most relevant works and that it is enough to motivate a knowledge gap or that your problem is a CS problem.

*Summarize what others **have done** as well as **not have done** with one or two sentences. Summarize **their conclusion** with one or two sentences. Then finally **position yourself** in relation to these related works eg. "this is close to what I intend to do", "I build on top of this", "my work is different from this" as discussed in Workshop 1 and 2.*

Again make sure this is within CS and on topic of your research area. Check the conference or journal so that it is a scientific CS venue.

*Is there **active research** in this area? Answer this question by looking at when the papers were published.*

Knowledge Gap/Challenge/Problem

Describe what is missing in the current knowledge as described in the related work, "the gap". Motivate from a CS research point of view why this gap needs to be bridged. As discussed in Workshop 2 and 3.

A literature review article may be a good reference here if it describes a gap.

Knowledge Contribution/Action

Describe what you intend to do about the knowledge gap/problem/challenge and what you hope to accomplish with that action. Describe with precision as discussed in workshop 2. Think about the "zoom-levels".
Make sure this contribution is within Computer Science and suitable for your program profile.

The contribution can be described as a set of research questions that can be answered.

Empirical Evidence/Evaluation

Briefly describe how you intend to gather new knowledge, or how you intend to evaluate the action you are going to make in a credible way. Can your findings be used for more than the

specific case you investigated?
For example, interviews, observations, experiments, simulations, etc. This is and should be a draft that you continue to work on in future steps.
(Population/Sampling/Reliability/Validity/Bias/Generalizability)
It is good to write about what methodology you intend to use here. Check course homepage for this:
https://coursepress.lnu.se/courses/thesis-projects/02-course-content/02-research-methods
If you can cite a method paper it is a good place to do so.

References

Use IEEE format and include a direct link to the article. This is not included in the 2 pages limit.