university of groningen

faculty of science
and engineering

artificial intelligence
computational cognitive science

Development of the D-API Robot-User Interface Including Feedback to Help Interaction

Goedele Student
(s1234567)

March 18, 2026

Master's Research Project Proposal
Artificial Intelligence / Computational Cognitive Science
University of Groningen, The Netherlands

Internal Supervisor(s): Prof. Dr. Henny Prima (Artificial Intelligence, University of Groningen)

External Supervisor: Prof. Daniele Segundo (University of Estreniera, Italy)

1 Introduction

Your introduction should contain the subject of your graduation project, the reason you are performing this research project, and a general description of the problem definition/research question.

2 Theoretical Framework

In the paragraph on your theoretical framework, you should inform the reader about the theoretical background of your research. Thus, describe the scientific background that is relevant to and has led to this project. You will have to refer to the literature that you have used to build your theoretical framework.

3 Research Question

This paragraph should contain a concrete version of your general research question, along with an operationalisation of said question. If you are proposing an external research project, it may also be useful to describe the main traits of the company/institute you are performing the research at, to give an impression of the direction and background of your research question (provided they are relevant to your research).

4 Methods

Describe how you are going to answer your research question, what you are going to measure, and in which way. Why are you going to use this measure and why are you going to measure your data in the way you propose? You should give a general description of your methods that explains how you wish to answer your research question in words that are clear to the reader.

5 Scientific Relevance for Artificial Intelligence

In this paragraph, you should describe the scientific and social relevance of your graduation project, as well as the goal of your graduation project. What does one hope to accomplish by performing this research? Why is this research a relevant contribution to your research field and/or society?

If you plan to do your research project in a group within the research institute of your own degree program, also indicate how the research contributes to the institute and whether it is a continuation of their research or exploratory research aimed at preparing a new line of research.

6 Planning

The planning should indicate what the work parts of the graduation project are and when you expect to complete these work parts. Note that a time planning that is more specific is probably better (provided that you try to stick to it).

- WP1 Writing my literature study and project overview. Think of and discuss game concepts.
- WP2 Make and discuss mock ups of the games.
- WP3 Test and discuss games.
- WP4 Implement the actual games.
- WP5 Run experiments.
- WP6 Buffer.
- WP7 Finish company-related matters.
- WP8 Write thesis.

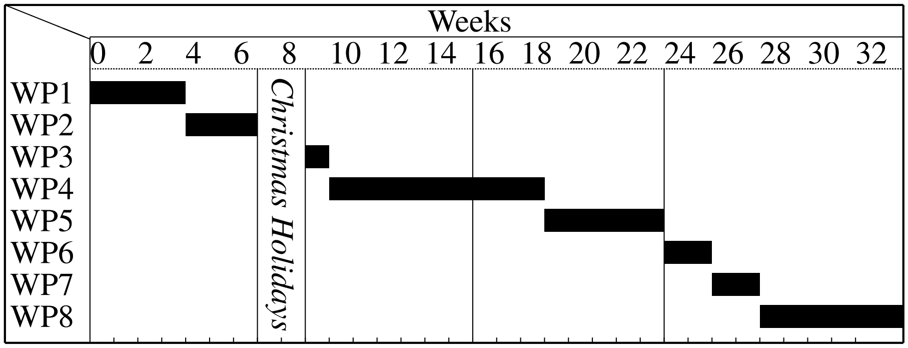

Figure 1: Duration of Work Parts

7 Resources and Support

Use this paragraph to describe the resources and support of the place at which you will perform your graduation project. Will you be able to work at a PC? Did you secure the rights to work with the laboratory setup you require? What will the day-to-day supervision be like? Indicate how well you have discussed these things with your supervisors. Did you have to agree on confidentiality ("officiële geheimhoudingsplicht")? Also indicate whether you expect to require a work station provided by the department (limited space).

References

Ackley, D. H., & Hinton, G. E. (1985). Have a nice day. *Cognitive Science*, *9*, 147–168.

Gardner, E. (2008). Structure of metastable states in the robot model. *Journal of Physics, part A*, *9*, L1047–L1056.

Example Reference 1 is about a study describing how to have a good day (Ackley & Hinton, 1985).
Example Reference 2 is about the robotics research by Gardner (2008), that shows the structure of metastable systems.

(Try to keep your project proposal within 5 pages)