

Prototyping Animal-Computer Interaction

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Figure 1: Photo by Alison Pang on Unsplash

0.1 Outline

- **Due date:** 2025-08-18 23:59 AEST
- **Mark weighting:** 20%
- **Submission:** submit your assignment according to the instructions below
- **Policies:** Late submission is not permitted for this assessment. This is an individual assessment task.
- **Gitlab Template Repository:** [comp3900-2025-prototyping repo \(link\)](#)

0.2 Description

Assignment 1 involves creating a prototype that solves a problem. Your prototype must engage with an interaction design challenge and consider multiple perspectives.

The interaction design challenge is as follows:

Animal-Computer Interaction:¹ On 1st June 2025, a burst of precisely tuned neutrinos struck the earth dramatically increasing the intelligence of all non-human animal life. Mammals, birds, fish, reptiles, amphibians and even insects now have near- or above-human intelligence². After weeks of diplomatic negotiation (and worldwide adoption of vegan diets) animals now seek to participate in pan-species society on earth. The only problem is that *they can't use any of our computer systems!* Your challenge is choose an interactive computer system (software and hardware) to accomplish **one everyday task**, and produce a **prototype design** that is accessible to **one kind of non-human animal** as well as a human.

To accomplish this task, you will need to have a strong understanding of *usability*, *design*, and *prototyping* as discussed in the first four weeks of this course. Your submission must demonstrate sophisticated engagement with these concepts.

Your submission will include documentation of your prototype and design process as well as a written design rationale. Your written rationale should have the following sections:

- **Task, problem, and users:** explain the task, the users you are targeting (i.e., the animal), and the problems that these users will encounter at present
- **Design process:** explain the process you have followed to come up with a prototype including documentation of your sketching and ideation
- **Prototype features:** explain your prototype and how it meets the needs of the users (animal and human) in this context of use
- **References:** include at least two references in ACM format

0.3 Specification

Your submission must:

- include at least three sketches
- include visual documentation of a prototype (any level of fidelity)
- include at least two references to external sources in ACM format
- be written in markdown format
- be a maximum of 1500 words + 10% acceptable buffer (i.e., no more than 1650 words)
- must be uploaded to *your fork* of the comp3900-2025-prototyping repository on Gitlab by the due date

0.4 Submission Process

1. Fork the template repository.
2. Follow a design process of ideation, sketching, and prototyping to address the design challenge.
3. Document your design process (e.g., with photos, screenshots, other media) and upload the documentation to *your fork* of the template repository.
4. Write a design rationale and reflection following the template in the design repository.
5. Don't forget to include at least two references to external sources in ACM format in your documentation.

0.5 Notes

- Don't forget to ask for help or advice on the course forum: Edstem discussions
- Generative AI is not banned in this course, but sketches, prototypes and written work is expected to be primarily your own work. Any use of generative AI must be cited including the scope to

¹Animal-Computer Interaction is actually a real field! See proceedings from the 2024 conference (*ACI '24*, 2024).

²This bit is not real. I made this bit up.

which it is applied. Use of generative AI without appropriate explanation and referencing comes under the *N* category in the marking rubric.

0.6 Marking Rubric

CRITERIA	HD	D	CR	P	N
Sophistication and clarity of the design rationale in terms of HCI theories, perspectives, and concepts. (50%)	Excellent to outstanding design rationale demonstrating consideration of HCI theories and perspectives that goes beyond learning materials. Level of communication and referencing is excellent.	Very good design rationale demonstrating consideration of HCI theories and perspectives that follows specification, but not beyond learning materials. Level of communication and referencing is excellent.	A design rationale that follows specification with HCI theories and perspectives at the level of learning materials. Level of communication and referencing is good.	Some effort to follow the specification for a design rationale. May touch on some HCI concepts. Level of communication and referencing may have some errors.	A design rationale with little connection to HCI concepts or one that is below acceptable standards. May not follow the specification or contain serious errors in communication and referencing.
Sophistication as a prototype addressing identified user needs. (50%)	Excellent to outstanding prototype demonstrating a thorough design and prototyping process with clear consideration of user needs. Excellent adherence to the assessment format.	Very good prototype demonstrating a thorough design and prototyping process with consideration of user needs. Excellent adherence to the assessment format.	A good prototype that demonstrates a design and prototyping process. May not fully address user needs. Good adherence to the assessment format.	A satisfactory prototype with limited engagement with the design process or user needs. Adherence to the submission format may be poor.	Below acceptable standards as a prototype. May have very poor adherence to submission format.

References

ACI '24: Proceedings of the international conference on animal-computer interaction. (2024). Association for Computing Machinery. <https://doi.org/10.1145/3702336>