

# KED2025 Assignment 1: Experimenting with LLMs

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## Requirements

- Deadline: 28 February 2025 (by midnight)
- File format: PDF
- Language: German or English
- Naming schema: `surname_ked2025_1.pdf`  
Replace `surname` with your surname.
- Submit your solutions on time via the respective exercise module on OLAT. The module is only open until midnight.

## Introduction

You learn how to use chatbots like ChatGPT more proficiently.

Modern chatbots are based on large language models (LLMs). There are various competing models and platforms available, among which ChatGPT developed by OpenAI is one of the most popular.

LLMs are part of a new generation of Generative AI that is having a growing impact on society. It is paramount to learn how to use AI tools effectively and also to understand their shortcomings.

The text input you provide to a chatbot is called prompt.

## 1 Task 1

Share your experience with chatbots in at least one paragraph.

- *If you are using chatbots:* What is your preferred chatbot? For which tasks are you using it (e.g. particular tasks, fun)? When is it useful? What is the positive or negative experience that has surprised you the most? Has your experience changed over time? When do you prefer a classic Google Search and when a chatbot? Do you apply different techniques when prompting compared to searching?
- *If you are not using chatbots regularly:* Share your take from a non-user perspective and explain briefly why you are not using chatbots.

## 2 Task 2

Experiment with a chatbot of your choice in-depth and reflect about its answers.

**It is important that you always start a new chat after each prompt.** The history of past answers is guiding the upcoming answers in the same chat window, which may bias your experiments. Although even taking this measure, please be aware that chatbots on any platform usually provide different answers with every attempt, even prompted with the exact same text. Thus, repeat your prompts in a new chat a few times to get a feeling for this variance.

Chatbots may be very wordy sometimes. To get shorter answers, simply tell the model how long the answer should be (e.g. **Give me 10 examples...**, **Summarize in a 3 sentences...**, **Explain in a paragraph**).

1. Go to the platform with the chatbot of your choice. If you don't have any, go to <https://chatgpt.com/> and create an account.
2. Open the paper by Williams and Huckle (2024). The paper talks about various failure modes of popular chatbots and was originally published in June 2024. Are chatbots still failing at the same prompts?
  - Read the abstract, go to the appendix in chapter 9, and check out the provided prompts.
  - Pick at least two prompts and check the human reference as well (or come up with a similar challenging one yourself).
  - Prompt the selected chatbot with them and analyze the responses. Are they correct? Are there some oddities?
  - Share the platform and the name of the model you used in your submission.

### 3 Feedback

Briefly answer the following questions.

1. Do you have any questions?
2. How long did it take to solve this exercise? Give a fair estimation.
3. Was this assignment interesting?

### 4 Bonus

ChatGPT is popular, yet it is only one model among many others. Developed by companies or research labs, those models are either proprietary (i.e., commercial) or open-source (i.e., well-documented and free to use for anyone).

There is fierce competition for developing the best model, and new models are published every week. Evaluating the best model is challenging by itself, though.

Contribute to science by deciding which of two outputs is better given any prompt. You can also experiment with other modalities than text (e.g., images). Go to <https://chat.lmsys.org/> and start your evaluation.

### References

Williams, Sean, and James Huckle. 2024. "Easy Problems That LLMs Get Wrong." June 1, 2024. <https://doi.org/10.48550/arXiv.2405.19616>.