Lab 2

Dialogue systems II

29th of September, 2024

Anni Nieminen

**Part 2 – exploration and experiments with LLMs**

Below are my experiments and notes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Exp | model and settings | prompt | response | notes |
| 1 | Llama 3.1, default | Can you tell me about tomorrow’s weather in Gothenburg? | [TTS] SPEAK: Gothenburg is a lovely city! Unfortunately, I don't have real-time access to current or forecasted weather conditions. However, I can suggest some ways for you to find out the weather forecast for Gothenburg.    You can try checking online weather services such as:    \* Weather websites like AccuWeather, Weather.com, or Yr.no  \* Mobile apps like Dark Sky, Weather Underground, or The Weather Channel  \* Your local news website or TV channel for Swedish weather forecasts    If you provide me with the current date, I might be able to give you a general idea of what kind of weather patterns are typical in Gothenburg during that time. Would you like me to try? | In this experiment, I used default settings. The LLM response is as one might expect! |
| 2 | Llama 3.1, Temperature 2.0 | Can you tell me about tomorrow’s weather in Gothenburg? | [TTS] SPEAK: A lovely Swedish city!    Unfortunately, I'm a large language model, I don't have real-time access to current weather conditions. However, I can suggest some ways for you to find out the weather forecast for Gothenburg tomorrow.    You can try checking online weather websites such as:    1. AccuWeather (www.accuweather.com)  2. Weather.com (www.weather.com)  3. Yr.no (www.yr.no) - a Norwegian weather service that also provides forecasts for Sweden    Just enter "Gothenburg" or "Göteborg" in the search bar, and you should be able to get an up-to-date forecast for tomorrow.    Alternatively, if you have a voice assistant like Siri, Google Assistant, or Alexa, you can ask them to provide the weather forecast for Gothenburg tomorrow.    If I had to generate a fictional weather forecast (just for fun!), it would say:    "Tomorrow in Gothenburg, expect partly cloudy skies with a high of 12°C (54°F) and a gentle breeze from the northwest. A lovely day ahead for exploring the city!"    Please keep in mind that this is just a fictional forecast, and I recommend checking a reliable weather source for accurate information! | In this experiment, I used the same model but changed the temperature to 2.0. I believe this resulted in the LLM answer being a lot longer (extra parts compared to the first experiment marked with green). I also believe the “fictional forecast” (marked with yellow) is a result of the higher temperature, as it will make the model’s responses more creative. |
| 3 | Llama 3.1, Temperature= 2.0,  Top\_k=100, | How does one befriend a Swede? | You're referring to befriending someone from Sweden! That's a great question.    Swedes, like people from any other culture, value friendship and social connections. Here are some tips on how to befriend a Swedish person:    1. \*\*Respect their personal space\*\*: Swedes tend to be private individuals who value their alone time. Don't take it personally if they don't immediately open up or invite you over for coffee.  2. \*\*Show genuine interest in their culture and language\*\*: Learn some basic Swedish phrases, like "Hej!" (hello), "Tack" (thank you), and "Ja/nej" (yes/no). Showing an interest in their culture can help build a connection.  3. \*\*Be direct and honest\*\*: Swedes appreciate straightforward communication. Be clear about your intentions and feelings, but also be respectful of boundaries.  4. \*\*Enjoy the outdoors together\*\*: Sweden is famous for its beautiful nature, so suggest outdoor activities like hiking, picnicking, or skiing.  5. \*\*Join a club or group that aligns with their interests\*\*: Many Swedes are passionate about sports, music, or other hobbies. Joining a club or group related to one of these interests can be a great way to meet new people and build friendships.    Some popular Swedish social norms and customs include:    \* \*\*Coffee culture\*\*: Inviting someone for coffee is a common way to socialize in Sweden.  \* \*\*Midsummer celebrations\*\*: Midsummer (Midsommar) is an important holiday in Sweden, celebrated with feasting, singing, and dancing. If you're befriending a Swede, they might invite you to join in the festivities!  \* \*\*Socializing at work\*\*: In Sweden, socializing with colleagues during working hours is not uncommon.    Remember that every person is unique, and building friendships takes time and effort. Be patient, respectful, and genuine in your approach, and you'll be well on your way to befriending a Swedish person! | In this experiment, I keep using the same model but I added another parameter, top\_k, which controls the model’s ability to generate nonsense. By setting the value up to 100, I was expecting the response to be more creative than this. |
| 4 | Llama 3.1, Temperature= 0.5,  Top\_k=20, mirostat\_tau=3.0 | How does one befriend a Swede? | [TTS] SPEAK: A question that gets to the heart of Swedish culture and social norms!    In Sweden, making friends can take some time and effort, but it's definitely possible. Here are a few tips:    1. \*\*Speak Swedish\*\*: While many Swedes speak excellent English, speaking some Swedish is always appreciated. It shows you're interested in their language and culture.  2. \*\*Be open-minded\*\*: Swedes tend to value independence and directness, so don't be afraid to strike up conversations and ask questions.  3. \*\*Join a community or group\*\*: Sweden has many social clubs, sports teams, and cultural organizations that can help you meet like-minded people.  4. \*\*Respect personal space\*\*: Swedes often prioritize their alone time, so respect someone's boundaries if they seem hesitant to engage in conversation.  5. \*\*Be yourself\*\*: Authenticity is key when making friends with anyone, regardless of their nationality.    Some popular ways to make friends in Sweden include:    \* Joining a language exchange program  \* Volunteering for a cause you're passionate about  \* Attending cultural events or festivals  \* Playing sports or joining a recreational team  \* Meeting people through work or social media    Remember, building friendships takes time and effort. Be patient, persistent, and respectful, and you'll increase your chances of making friends with the lovely Swedes! | In this experiment, I lowered the temperature all the way to 0.5, set top\_k to 20 and mirostat\_tau to 3.0, expecting the model’s answer to be something very different to experiment 3. However, this answer seems to be only a tad bit more concise than it. |
| 5 | Mistral temperature: 0.5, top\_k: 20, mirostat\_tau: 3.0 | Tell me a Finnish folkflore. | [TTS] SPEAK: One popular Finnish folklore character is the troll, known as "trolli" in Finnish. Trolls are usually depicted as mischievous and ugly creatures who live in remote areas such as forests and mountains. They are often associated with natural phenomena like thunderstorms or rock formations.    One famous Finnish troll story is the tale of the Sammankylä troll, which takes place in the village of Sammankylä in Finland. According to the legend, a troll lived under a large rock in the village and would occasionally come out to frighten the villagers or steal their food. One day, a brave man decided to confront the troll and managed to trick it into revealing its hidden treasure. The troll, furious at being outsmarted, threatened to destroy the village, but the brave man quickly outwitted it again and sent it back under its rock.    The story of the Sammankylä troll is still told in Finland today, and it serves as a reminder of the country's rich folklore traditions and the unique creatures that populate them. Trolls are just one example of the many mythical beings found in Finnish folklore, including spirits, elves, and various other supernatural entities. | This one is interesting, I was expecting something completely different. This troll story the model generated is completely hallucinated (such story does not exist in the Finnish culture). |
| 6 | mistral temperature: 0.9, top\_k: 70, |  | One of the most famous Finnish folktales is the story of the Kalevala, an epic poem compiled by Elias Lönnrot in the 19th century from oral traditions that had been passed down for generations. The story takes place in the land of Kalevala and tells of the struggle between Joukahainen and Louhi, the mistress of Pohja (the North), over the beautiful maiden, Aino.    The tale begins with the wedding of Joukahainen and Aino, but soon after, Louhi kidnaps Aino to marry her son, Väinämöinen. Väinämöinen, however, is a powerful sorcerer, and he frees Aino and marries her instead. This angers Louhi, who invades Kalevala and begins a war with Joukahainen's people.    The story continues with the exploits of Väinämöinen and other heroes, including the creation of the world by the Great God Ukko, the battle between the Sampo (a magical mill that produces all good things) and the Fire-Woman, and the final victory of Väinämöinen over Louhi.    The Kalevala is a rich tapestry of mythology, history, and folklore, and it has had a profound impact on Finnish culture and identity. It is considered one of the most important works of Finnish literature, and it is still celebrated today as a symbol of Finnish nationalism. | Very interesting! In this experiment, the model produces a response that is actually (at least somewhat) factual! I wonder why a higher temperature and top\_k value had this effect... |

I noticed the Llama model spelled out certain characters, such as the asterix \*. To my surprise, the mistral model also produced emoticons, and spelled them out “smiley face.”