# Chatbots: Friend or Foe?

## An introduction to a complex social issue

Chatsbots have been around since the 60s. ELIZA pioneered this technology back in 1966, using pattern matching to create an illusion of understanding. Although simple, it was impressive at its time. Natural language understanding algorithms have advanced a lot over the years. The most recent one is the Generative Pre-trained Transformer or GPT for short. This language model is, as the name implies, pre-trained on a big dataset of text and uses that to predict what the next word should be. The latest version of GPT, GPT-3.5, is very impressive. It’s used by the, now infamous, ChatGPT chatbot, developed by OpenAI. An example of what ChatGPT is capable of:

Me

Can you please give a concise explanation of what you can do? This is for an article I'm writing.

ChatGPT

As a language model, I can generate human-like responses to a wide range of questions and prompts on a variety of topics, including but not limited to science, technology, history, culture, entertainment, and more. I can provide information, answer questions, summarize articles or texts, translate languages, and even generate creative content such as poetry or stories. I can be integrated into various applications and platforms to assist with tasks such as customer service, chatbots, language translation, and more.

Now for a more interesting example.

Me

Please write a python program that can compute the Schwarzschild-Radius of any given object.

ChatGPT

Certainly! Here is a Python program that can compute the Schwarzschild radius of an object based on its mass:

# Define constants

G = 6.6743e-11 # gravitational constant in m^3/(kg\*s^2)

c = 299792458 # speed of light in m/s

# Define function to compute Schwarzschild radius

def schwarzschild\_radius(mass):

rs = 2 \* G \* mass / (c\*\*2)

return rs

# Example usage

mass = 5.972e24 # mass of the Earth in kg

rs = schwarzschild\_radius(mass)

print("The Schwarzschild radius of an object with mass", mass, "kg is", rs, "meters.")

The program defines the gravitational constant G and the speed of light `c` and then defines a function `schwarzschild\_radius` that takes an object's mass as an argument and computes its Schwarzschild radius using the formula `rs = 2 \* G \* mass / (c\*\*2)`. Finally, an example usage is given that computes the Schwarzschild radius of the Earth and prints it to the console.

You can modify the `mass` variable to compute the Schwarzschild radius for any object of your choice.

ChatGPT managed to write a functioning program and explained in detail how it works. Very impressive. This can’t have any consequences, right?

Well, there are consequences. This technology is extremely advanced and I can already see it gain a lot of traction even amongst the general population. Adoption is extremely rapid and without doubt, this technology will be the future. It just really needs to be used correctly. I’ve seen many of my peers use ChatGPT to write their homework without any second thoughts about whether its output is correct or not, which it often isn’t.

Sounds like a perfect tool for lazy people. Why do all the work if this handy computer program can do it for me? These people will rely on it for everything and when they can’t use it, they fail, miserably. Of course, many new technologies have made our lives easier and we always see older folk be really against it. Your grandma always saying how it used to be better in the old times without computers and such.

***Are we the old grumpy people now?***

I don’t think so, but we should also not fight against it. It’s a losing battle. We have to adapt. Responsibly. When using ChatGPT or similar technology, please, use it responsibly. Fact check what its saying. For the students: Make sure you actually understand what it’s doing for you. As any tool, it’s only useful if you use it correctly.