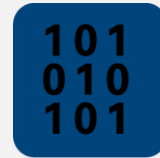


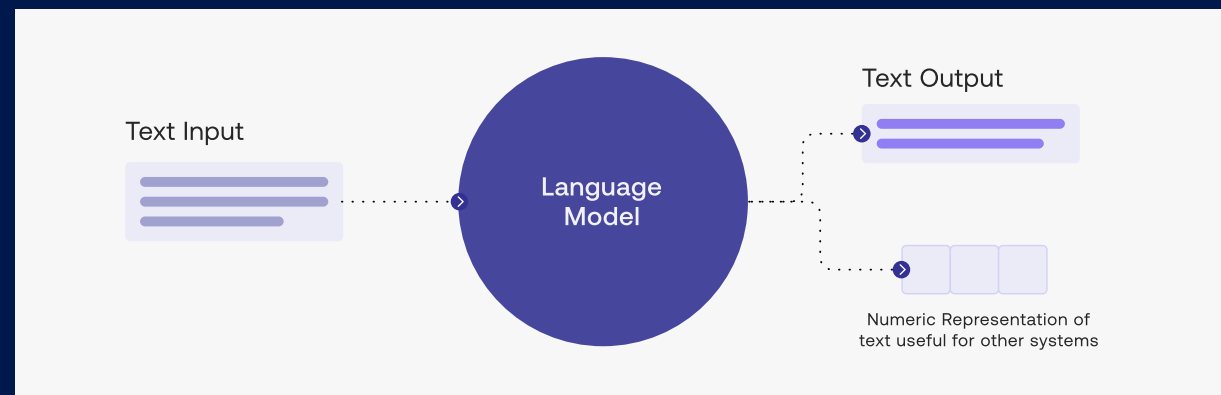
# A Brief Intro to ChatGPT



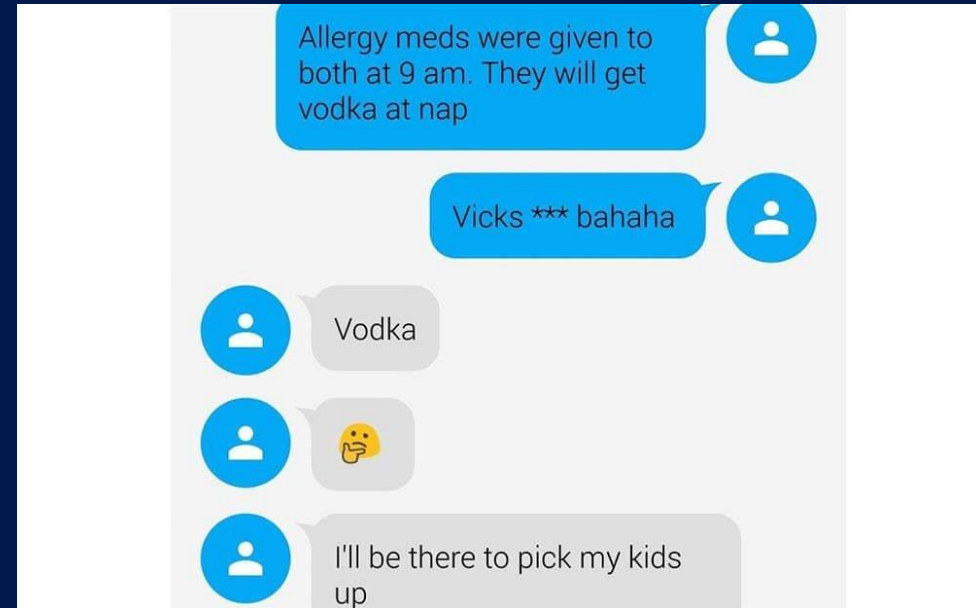
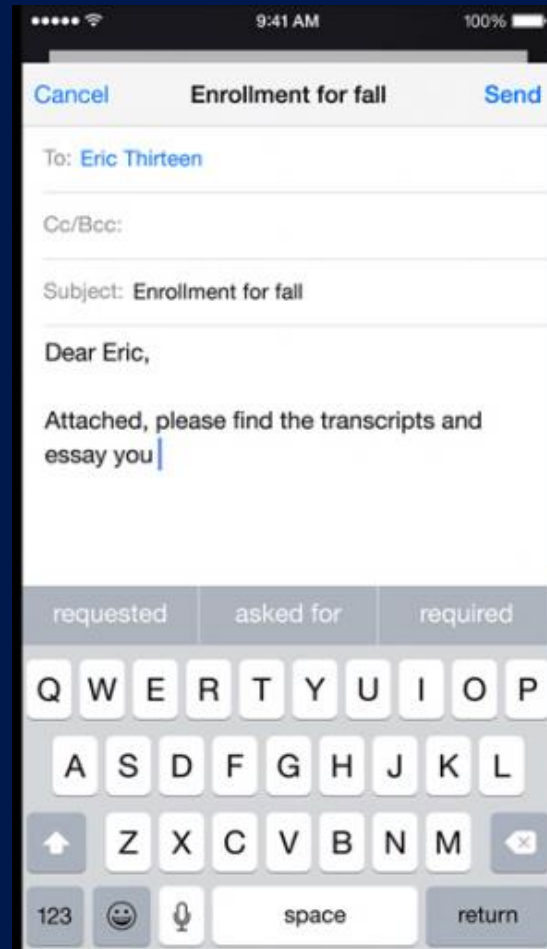
Dr. Josh Locklair

# What is ChatGPT?

- Large Language Model (LLM)
  - Predicts text which should follow from a given prompt using probabilistic methods
  - Machine learning model trained on *massive* amounts of text

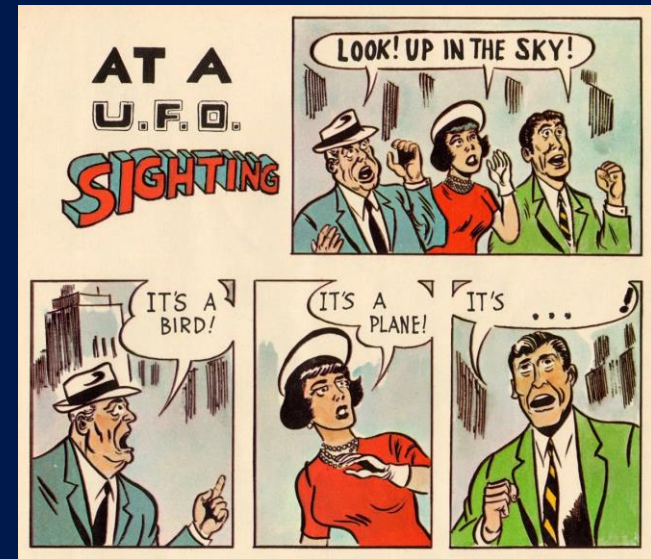


# What is ChatGPT?

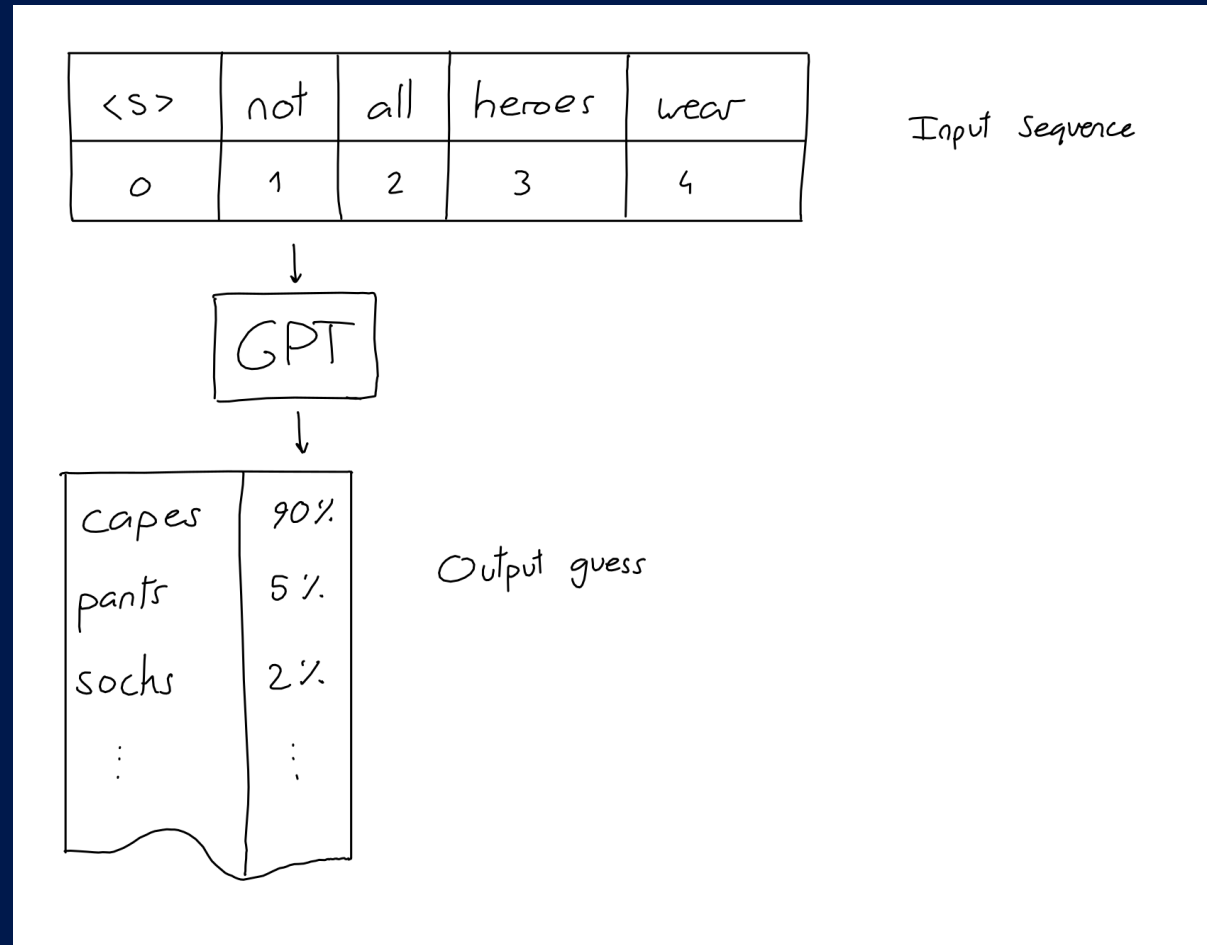


# GPT-3

- GPT-3 Language Model
  - 499 Billion tokens (words) drawn from the web, books, and Wikipedia
  - Trained to predict the next word in a sequence



# GPT-3

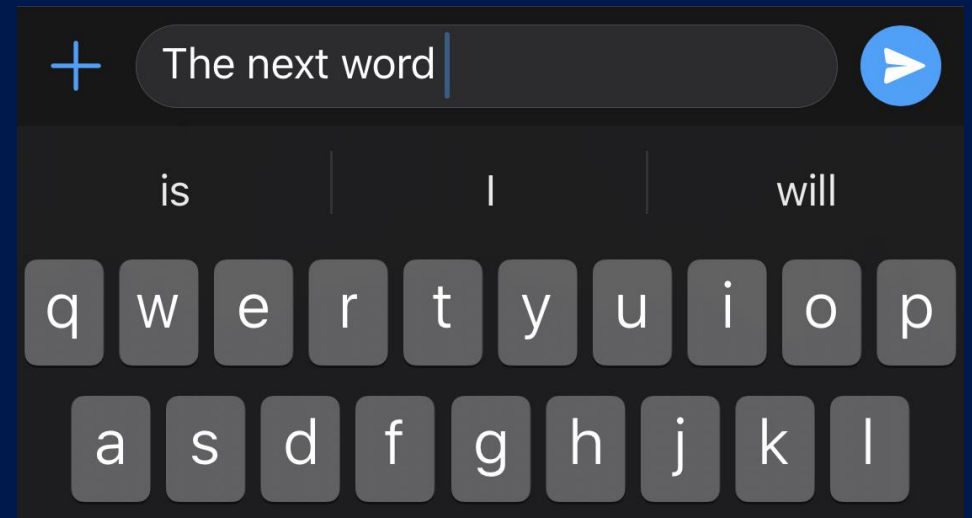


# GPT-3

- Input sequence
  - Up to 2048 tokens (words encoded as numeric values)
  - Encoding allows word meanings to be compared (e.g., similar words have similar numeric values)

# GPT-3

- Output sequence
  - Up to 2048 “guesses” at the *most likely* next word in the sequence



# GPT-3

- Key advantages
  - Size of language model
  - *Attention* (technique for determining how important each token is to the output)



# Risks of LLMs

- LLMs absorb the worldview and biases of their human creators
- LLMs “blindly” propagate information without consideration of human impact
- LLMs cannot consider the truth of the text they generate

# Resources

- [https://dugas.ch/artificial\\_curiosity/GPT\\_architecture.html](https://dugas.ch/artificial_curiosity/GPT_architecture.html)
  - An excellent high-level overview of the GPT-3 architecture
- <https://lambdalabs.com/blog/demystifying-gpt-3>
  - A slightly more technical summary of GPT-3 and related LLMs
- <http://jalammar.github.io/illustrated-gpt2/>
  - Attention and self-attention in the context of GPT-2
- <https://dl.acm.org/doi/pdf/10.1145/3442188.3445922>
  - Discussion of the risks associated with LLMs

# Resources

- <https://mindmatters.ai/2022/12/why-we-should-not-trust-chatbots-as-sources-of-information/>
- <https://mindmatters.ai/2023/02/utopias-braniac-chatgpt-gives-biased-views-not-neutral-truth/>