IFT 360

Assignment 2

AI Applications Research

1. Do you know any AI Applications that you find interesting?
   1. I do find AI interesting, but more than that I feel it is quickly moving from an interesting field of study into an irreplaceable tool within our society for a number of reasons. First, we produce so much data now that classical means of filtering through it are nearing the point of being ineffective. Some companies now require AI to deliver products with tangible value and would be unable to without AI simply due to the quantity of data. Second, medicine, specifically medical imaging, is markedly more accurate when AI tools are used in conjunction with trained medical professionals. AI is fascinating, powerful, and here to stay. It will only become more relevant.
2. Research AI applications. List five applications. At least two applications should be different from the ones discussed in the lesson slides. Briefly explain each application. The explanation can be as short as two sentences and as long as one paragraph.
   1. Watson
      1. Watson is a system developed by IBM and designed to answer questions asked to it using natural language. It was initially intended specifically to answer questions on the game shot Jeopardy, but has since been used in medicine for decision making in lung cancer treatment.
   2. Deep Blue
      1. Deep Blue is another system developed by IBM, but this one is designed to play chess. Notably, Garry Kasparov played against this system twice. He defeated it the first time 4-2-0 (Win-Loss-Draw), and lost the second time 3-2-1.
   3. AlphaGo
      1. AlphaGo is another system designed to play a game and was created by a company called DeepMind. AlphaGo learned from both human and computer gameplay.
   4. ChatGPT
      1. ChatGPT is a recently developed AI chatbot developed by OpenAI. It is meant to simulate human conversation, but another more interesting capability is to write and debug software.
   5. DALL-E
      1. DALL-E is another system developed by OpenAI and is designed to generate digital images from natural language input. This system can generate very specific imagery depending on the prompt and can even generate edited or modified version of existing imagery.
3. Which one do you find most interesting?
   1. I find DALL-E most interesting because it’s the one I understand the least. It’s fascinating to me that software can create images from natural language text input. It’s easier for me to understand how an ask/answer AI systems work, such as Google Assistant, Siri, or Alexa. Creating images from text input is impressive to me. I’ve played with DALL-E some and while some of the images has strange flaws and artifacts, I’ve never received a response that didn’t at least resemble what I requested.

# References

1. Upbin, Bruce (February 8, 2013). "IBM's Watson Gets Its First Piece Of Business In Healthcare". Forbes. Archived from the original on September 18, 2017. Retrieved March 19, 2023.
2. Tung, Liam (January 26, 2023). "ChatGPT can write code. Now researchers say it's good at fixing bugs, too". ZDNET. Archived from the original on February 3, 2023. Retrieved March 19, 2023.