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CSE 485
4/14/2023

Seminar 1 – Generative AI Demystified

Speaker: Bryan Catanzaro, VP Applied Deep Learning Research

Location: NVIDIA GTC, March 21, 2023

Bryan talks in this presentation about the various industries that are implementing generative artificial intelligence. These industries include education, healthcare, biology, agriculture, programming, writing, marketing, among many others. Generative AI allows for the creation of new data, and is controlled by conditions. Language models, like ChatGPT, are a popular example of generative AI. They have evolved from performing simple tasks, to being capable of generating expressive, long-form, coherent text, and of using tools such as calculators, or searching the web.

With these advancements in AI however, there come many challenges, such as IP ownership, harmful application of the artificial intelligence models, and even the output of the models themselves. He mentions that these challenges can be addressed by ensuring that the models have the right to reproduce and extrapolate data, attributing the output to the appropriate sources, and preventing the output from the model from being used to manipulate or mislead people. He finished the presentation by demonstrating some generative AI's that NVIDIA has created, and by asking some open ended questions.

Takeaways: I learned a bit from this presentation on top of what I already knew about generative AI and their capabilities. However, I was introduced to a new term "zero-shot problem solving", which is a desirable trait of an artificial intelligence to solve a problem without having any prior training data for that specific task. In other words, zero-shot problem solving enables an AI model to generalize its learning to solve new problems without specifically being trained to solve them. I thought this was extremely interesting!