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IST 402 Notes - Week 15
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Notes for the following articles:

1. https://rodneybrooks.com/forai-the-origins-of-artificial-intelligence/
2. https://rodneybrooks.com/the-seven-deadly-sins-of-predicting-the-future-of-ai/
3. https://rodneybrooks.com/forai-machine-learning-explained/

Article 1: Artificial intelligence is a concept that has been developed and modified exponentially in the past decades. Although, by learning AI concepts there still is much work left to be uncovered about the truths of AI. The term, "Artificial Intelligence," was first mentioned in a proposal that was written in 1956, however the technical mechanics behind the concept would not be discovered for decades following the proposal. The proposal made a lot of good points of how neural networks can be linked to indicate relativity but on the other hand the technology at the time was not advanced for the current software to store algorithms.

One of the reasons it took AI and machine learning models so long to develop was that much of the original AI models had to be handwritten and in fact, algorithms had to be memorized by a photograph or notes. Even with little software necessary for developing models, original ideators of AI set the precedent for how ML would function with detailed sketches. Later in the century near the 1980s/90s, researchers would begin to distribute the work by identifying problems in separate groups rather than one collective effort. AI has came a long way from idea, to rough drafts, to development and deployment, and still much left to be uncovered. Although improved AI systems can be seen in the relative future, the main focus for now is to make systems as functional as possible and ensure the system's recognition functions properly for the time being.

Article 2: The future of artificial intelligence has been surrounded by people fearing that the technology will become too powerful and even take jobs away from the people. This article titled "The Seven Deadly Sins of Predicting the Future of AI" speaks about the dangers we could face by making these extremely large speculations regarding AI.

In the beginning of the article they provide a graphic created by Market Watch that claims that robots will take half of today's jobs in 10-20 years. The author of this article proposes that these claims were "ludacris" and that there is currently zero operational robots in these job arenas. The author states that "mistaken predictions lead to fear of things that are not going to happen."

The seven sins of predicting the future of AI starts off with the first sin being "over and underestimating". This is the idea that we overestimate the effect of technology in the short run and underestimate the effect in the long run.

- The second sin is “imagining magic” and this has to do with people imagining technology that we do not even know is capable yet, and therefore equal to magic. The author wants to draw people away from relying on a faith-based argument and not a scientific one.
- The third sin is “performance versus competence” and this involves individuals making generalizations about AI and comparing their task performance to the competence of a person. These two differ from each other in so many ways that it is best to stay away from making these generalizations.
- The fourth sin is called “suitcase words” and these words are applied to machines but they have completely separate meanings when they are applied to humans.
- The fifth sin is titled “exponentials” and it speaks about the idea that not all exponentials are real so when they are used in an argument they can not always be taken seriously.
- The sixth sin is “hollywood scenarios” and the author describes these to be when people spend time worrying about shock scenarios in the future. This is not helpful because the instances do not happen as often as you would expect and they typically do not have a connection to what happens in the future.
- The seventh and final sin “speed of deployment” has to do with people assuming that once a new technology is announced that it will be ready for deployment soon. The development of this technology, and the importance to perfect it makes this development process run longer than anticipated.

Article 3:

In the final article, the author starts by explaining that for many companies, they view ML as the future and companies with ML have superior technological prowess. He then goes to explain the misconception that people have about ML being able to basically take over the world eventually because they will just start to absorb all of the information around it even when it is not supposed to. He explains that this is not the case and ML simply listens for what it is programmed to and nothing more.

The author then goes off to explain how ML started with games and the war. Technology in the mid 1900’s was not very sophisticated but it had to do many jobs that are still required today such as decrypting codes and mapping plans. The idea for ML was first thought of when Samuel was trying to think of a way to have the computer be able to play checkers and learn from the opponent and now ML exists. Games have been a major factor in the advancements of ML because as games have become more and more advanced the amount of information that the machines have to take in and decipher to create outcomes has become much more technical and difficult.

The article then goes over how the matchboxes work in order to play the game of tic-tac-toe and how many actually possibilities it can go through in order to work on harder questions and problems. The system that Alan has to go through in order to pick all of the right components of the answer has become much simpler than it was in the past which allows for faster answers and more accurate ones. The author ends with explaining that ML does not do anything the way a

human would. In the tic-tac-toe example, it is explained that the machine doesn’t even know that it is trying to get three in a row to win it is just programed to get the three.