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Major: Supply Chain Management

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| **AREAS OF RISK** | **STEPS TO TAKE** |
| **Portability Trap** – Gebru/Denton Lecture | Because the field of supply chain is so diverse and unique, it is vital that I do not fall for the portability trap. Just because one method of AI works well for a specific situation does not mean that it will have the same level of effectiveness for another situation that I encounter. If I am planning on recycling a process from another project, I must make sure that all components are compatible. If they are not, I must adjust or omit certain aspects to make sure that I am getting the most out of the process. |
| **Solutionism Trap** – Gebru/Denton Lecture | Sometimes when working with AI, the first thing that you need to do is ask: Should we even be doing this in the first place? Supply chain is a very data analytic driven field, but sometimes there are only things that humans can do. One example that I can think of is during my internship over the summer, the manufacturing facility that I was working at has already implemented a large amount of AI into their processes. One thing that they have are self-driving forklifts. The forklifts picked a pallet of glue from the raw materials warehouse, dropped it off to a line, where it got used on the line. Unfortunately, it was the incorrect glue, sort of. The AI forklift did its job perfectly, but the label that was scanned to identify the glue was incorrect. The glue was the wrong color – so any human could have easily recognized that the label on the glue was not correct. Sometimes human discernment is needed in specific tasks. |
| **Human Alternatives, Consideration, and Fallback** – AI Bill of Rights | A common automated process in supply chain are VMI reports (Vendor Managed Inventory). While automating VMI reports would be a good choice because they need to be sent to suppliers daily and have a very strict process, there can sometimes be errors when pulling information from various software services and consolidating them into one file. Because of these errors/bugs that sometimes happen, it is imperative that a supplier has a human alternative/fallback to contact and confirm automated data if needed. If there is no fallback, a manufacturer can be shorted of raw materials, resulting in hundreds of thousands of dollars in wasted runtime. |
| **Hiring Bias –** EEOC-DOJ | The heightened use of AI when screening applications have caused a negative increase in hiring bias against people with disabilities. The best way to combat this is to take a deep dive into the model logic to see what words/phrases are triggering the AI to throw out applications, and determine what triggers need to stay and what triggers need to go. Once those are identified, necessary action needs to be taken to improve the negative hiring bias against people with disabilities. |
| **Data Requirements** – EU AI Act | When creating models within supply chain, we must ensure that the data sources that we use are thoroughly documented to establish and prove reliability/accuracy. We must also make sure that the data has minimal bias (because there is no such thing as zero bias unfortunately), and the data can be updated as the model gets more established and older to maintain its relevancy. |