Jayden Carlucci

Dr. Pursell

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Design Thinking

Design thinking is a very complex process that builds an understanding of groups, users, and consumers in order to target issues and create lasting solutions using data. When beginning the design thinking process, it is much more than just figuring out how to trouble shoot a problem. The process begins with discovery. As a data scientist you must discover the people, place, and problem. After discovery comes definition. We must then define it by converging that information we just gather on the people, place, and problem into a sufficient analysis. The next stage is execution. Within execution in the design thinking process, we must start by design diverging many concepts to solve and iterate as needed. And when that process is over, we must determine and converge the idea and move forward to implement.

Design thinking is a part of the end-to-end solution process. The end-to-end solution process takes the entirety of responsibility, building a system or solution from start to finish. Design thinking is the very beginning of the end-to-end process and sort of kicks off the modes of thinking while setting the tone for the rest of the project. Rest APIS allow flexibility during this process. The data is not tied down to one source, so its elasticity is endless, it can process and return data in multiple types of formats. This aids during the design thinking process as it allows data scientists to come up with multiple solutions.

Feedback loops are processes where you take the output of a process or the result and use those results to change/improve your system if it is not to your liking. Feedback loops help in the design thinking process because it helps test your solution. Rapid prototyping is pretty much just rushing to get a physical prototype of the solution out there. Although data scientists want the quickest solution, you cannot rush prototyping that much as you need to make sure it is a viable, lasting solution as well. The last important part of the design thinking process is MLOps. MLOps stands for Machine Learning Operations. Machine learning operations primarily are used to take machine learning models to use and monitoring.