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Design Thinking

When many executives want to create effective data projects they think of a complex technical process made up of statistical analysis and deep algorithms; it's thought to be a hard science that smart engineers can be siloed off and tasked to do. This could not be further from the truth, according to Dave Wentzel, a Technical Evangelist at Microsoft. He touts design thinking as a much more effective framework. Design thinking is a human-centric approach to an objective by getting people with diverse perspectives together to ideate creative solutions. The purpose of AI is to automate what people already do well. Data and math alone can't solve problems without human understanding and common sense. But the process of understanding is messy and some engineers hate this because there's no formula to capture everything in someone's head, until Elon Musk perfects Neuralink. Empathy is critical for design thinking so that everyone's perspective is heard, from janitor to CEO.

Data scientists need to use empathy to really understand the end users' needs. But listening to others doesn't stop after design thinking. Model optimization requires careful critique. Feedback loops give users the ability to grade the results of a model. Among Dave's favorites is the Facebook approach by asking users for a thumbs up if the model was accurate or a thumbs down with comments about why it was wrong. The balance between overfitting and underfitting a model is a thin line, feedback loops flag new situations that the data scientists can review and use to improve the model's accuracy.

Operationalizing the intelligence from feedback loops is known as Machine Learning Operations, or MLOps. MLOps take the human results provided from feedback loops and 'loop' it back into the model. It uses the feedback to correct the parameters and make sure it does not categorize that instance wrongfully again. This automatically increases the model's accuracy on real-world data. But when something goes wrong repeatedly, the data scientists should gather the users together and use design thinking to understand the new problem.

This is how to create a human-centric AI program. In a world filled with systematic bias, the combination of design thinking, feedback loops, and MLOps is the way to repair wrong and unfair data results. This is a method used to make data experiences better and increase success. Don't throw a bunch of data at a problem, solve it with human perspectives.