Thesis Project Portfolio

Artificial Intelligence: Automating Jira Requests

(Technical Report)

The Impact of Sports Analytics on Playstyle Evolution and Audience Engagement in the NBA

(STS Research Paper)

An Undergraduate Thesis

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Sociotechnical Synthesis

My STS Research looks at the National Basketball Association and the increased presence of sports analytics used by the teams and organizations. My question looks specifically at how the increase of sports analytics has effected the playstyle of the NBA to be more entertaining and which stakeholders it effects and what way. I found that there has been an increase in hiring data and sports analysts for NBA organizations, and teams with more data and sports analysts correlated with more wins overall. The increase in hiring shows that the NBA is moving towards a more data driven league.

From a playstyle standpoint, there was statistically significant data that there has been an increase in 3-point shot rate over the last decade. This number went from 22% to 39%. Added on to this, studies on the expected points per shot show that the 3-point shot has become a more efficient shot compared to the 2-point shot. The expected points for a 3-point shot is higher than the expected points for a 2-point shot. When watching the NBA today, it is apparent that the data is affecting the NBA playstyle. Each team plays similarly with an emphasis on pace (speed of play) and space (more players shooting 3-point shots). The data is driving the playstyle of the NBA.

The scoring increase because of the 3-point shooting, however, isn't increasing the viewership as much as one would think. The NBA viewership has actually gone down or stayed constant since this playstyle emerged. Fans dislike the playstyle and want teams to play more methodical basketball. They are tired of the predictability of having a game that is essentially a 3-point shootout and looks out of control.

From here, the NBA needs to do something to discourage the consistency and predictability of the games and create something exciting that fans would want to watch. Regular

season NBA games just aren't exciting and viewership will most likely continue to decline unless the NBA steps in.

For my technical project, I worked on a team for Markel, a specialty insurance company that was developing an in-house Artificial Intelligence Tool called the Insight Hub AI, which would make developers and underwriters more efficient. When an error in the system occurs, underwriters must submit a ServiceNow request which turns into a Jira ticket for developers to complete. The part of the AI process that my team and I worked on was the creation of the Jira ticket through the AI. When the underwriter finds a problem, they could explain the problem to the AI and the Insight Hub AI will create a Jira ticket adding in the underwriters' comments and data within the Markel systems that is relevant to the problem. That way, the underwriter doesn't spend time filling out a ServiceNow ticket and possibly meeting with a developer about it. The developer doesn't spend time looking for data about the problem or needing to have the problem explained by the underwriter. This expedites the process and decreases the downtime or bug of the Markel system.

Both the technical and STS research concern the increased use of data to influence decisions. In my STS research, NBA organizations used data in order to find the most efficient players and playstyles to win more games. At Markel, data will be used to solve problems faster. However, the use of data can have positive and negative effects. In the NBA, the effect is positive because teams are more efficient than ever, but negatively the data led the NBA to become less watchable. The effect of the Insight Hub AI is yet to be seen but hopefully the AI has a positive effect for Markel and the underwriters and developers.