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At the end of the 2019 season, the Golden State Warriors were at an all-time high. Looking to use the momentum of championships won on the court, the Senior Director of Business Analytics and Strategy, Ray Locke, looked to incorporate data science to help the team win off the court. Specifically, Locke was looking to solve the problem of unsold tickets, as selling more tickets is one of the easiest ways to increase revenue for the organization. In short, the data science team at the Warriors needed to solve a series of problems to maximize the number of tickets sold. These problems included deciding what type of experiment to run, how to store customer information, how to segment and target specific customer markets, how to advertise in a post-pandemic society, and deciding on a timeline to execute their plans.

I believe that 2 main themes stood out during the analysis of this case study. First, even though the Warrior's problems appeared technical, finding the solutions ultimately came down to intelligent decision-making. There is often a stigma around data science, with many believing that it is a purely technical field. While having technical skills is important, the ability to solve complex problems and to think critically is just as vital.  This case demonstrates that data science is an interdisciplinary field, combining technical and strategic skills. The ability to program like a data scientist must accompany the ability to think like one. The second theme was the collaborative nature of the case. It was fascinating to see the diversity of backgrounds amongst those working to solve these problems. Marketing, business analytics, data engineering, and advertising, all came together to contribute their knowledge from various disciplines. No matter

the situation, the Warriors data science team had to rely on a variety of different expertises in order to come up with an ideal solution.

The most important lesson I learned from the case was to ask smart questions. For instance, one of the first issues mentioned was the decision of what experimental test to use on the ticket purchasing model. Locke wanted to immediately start A/B testing so that they had time to learn from their mistakes. Michael Swandler, who worked under Locke as an analytics manager, urged him that the problem was more complicated than anticipated and that they should use a switchback experiment. Each test has its pros and cons, but that isn't the main point. The point is to not be afraid to question one another, even if they may be "ranked" above you. Moreover, I think the lesson to be learned stems from the fact that they are skeptical about what type of experiment to run, rather than complacent with the regular process. Others in a similar situation may blindly rush into these problems without a second of consideration. Having the ability to slow down and ask smart questions greatly reduces the risk of mistakes and increases the likelihood of success.

Another example of asking smart questions comes during the decision to hire a marketing firm to segment out the Warriors fan base. After a series of interviews, the third party firm categorized fans into either planners, in-between, or last-minute ticket buyers in relation to the time before games. The team had some success by varying the time that they sent their emails, either far before games or much later, but this process was not fine-tuned to the specifics of their fan market. Because Locke asked the intelligent question, "What if we were more specific in our marketing to fans" the data science team was able to capitalize on this segmentation. Once again, the main takeaway here is not that you should study more marketing, but that there is utility in asking deep questions. I think this example has special merit because the Warrior's data science

team had some success with the previous model. Locke not only asked a smart question, but was willing to risk changing something that wasn't necessarily broken.

After reading this case study, I think there are some interesting ways I could apply the same ideas to my career. I am planning to apply to graduate school for clinical psychology. One way to apply the lessons learned from this case comes from the way the Warriors data science team segmented their customer market. It may not look the same, as in I'm not trying to get people to show up and watch Steph Curry drain 3's from half-court, but the eagerness to increase client participation is the same. For instance, I may have some clients who schedule their therapy a month in advance, and some 48 hours in advance. It would make sense to create a model that sends out my availability cadered to those time preferences. It is also important to note that many clinical psychological practices offer a broad scope of services. Whether that be assessment, psychotherapy, adolescent therapy, or group therapy. It may be useful to become even more specific when marketing, segmenting emails to both the times that clients book and what type of services they typically need.

There are already some products that can assess different mental illnesses, but what if there was one that created an individualized treatment plan? A common critique of the clinical psychology field is that it doesn't work, and I think there's some merit to that. For example, I learned a statistic from my child psychopathology lecture that nearly 50% of adolescents who receive mental treatment fail to improve. Data science could be used to help mediate this. Imagine a model that could quickly analyze, provide a prognosis, and offer the highest success rate treatment plan. This wouldn't replace psychologists entirely, but it would change the way we approach mental illness. Rather than leave psychologists relying solely on their expertise, they

can combine their advanced knowledge of mental health with data science to craft a treatment plan with the highest probability of succeeding.

After reading this case, some of my perspectives about the field of data science changed. Primarily, I had held the belief that data science is an individual field, involving a single person click-clacking away on Python. In reality, the opposite is true. Data science is in its essence a collaborative field. If you are not collaborating and incorporating multiple expertises, then you aren't practicing data science. I had also held the belief that data science was solely used in big tech firms. I now have a better understanding that data science can be applied anywhere and everywhere. From schools to restaurants, to corporate businesses, to basketball teams, to any sort of industry. The ability of data science to create positive change is limitless.

A challenge I faced while reading the case was understanding the "why's" throughout the decision making processes. I am familiar with some statistics and computer science ideas, but there were some instances throughout the case where I needed to go back and read a section again. To overcome this, if there was a term I wasn't familiar with, or an idea I struggled to grasp, I took a few minutes to research them. This helped me to comprehend the case study with a higher level of understanding.

The Warriors' case study was a fascinating look into the applications of data science in sports. I found the way the team thought about problems, rather than how they solved them, was the most valuable takeaway. Going forward, I am going to be more eager to learn the details of data science so that I can leverage it to help others and my career. Moreover, I have a much better understanding of what the word "AI" actually means and it will impact my career and life.