

Case Study

AI AT THE TENNIS TOURNAMENT

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The following is based on fact, but the tournament and organizations mentioned are fictional.

The Durham Championships is one of the most famous tennis tournaments in the world. It is hosted in the United States in Durham, North Carolina, by the Durham Tennis Club, commonly known as the Durham Club. The Durham Club is proud of its place in the international tennis scene and declares its commitment to the sport in its mission statement: “We strive to create the best possible tennis experience for players and fans alike—an experience worthy of the sport we love.” Last year, in an attempt to better serve its fans, the Durham Club began to use AI technology provided by Global Computer Systems (GCS), a global information technology company, to build highlight reels automatically. This technology has helped the Durham Club get highlights to fans much faster, since previously a video-editing specialist selected and edited the highlights manually.

Recently, some problems with the highlight-selecting technology were noticed. After the most recent tournament, numerous fans wrote complaints to the Durham Club claiming that these automatically selected highlights were inferior to the manually selected ones used before. Many complaints were from fans whose favorite players never seemed to be shown in the highlights, even after spectacular performances. The Durham Club investigated the issue, consulting with GCS about their product, and found that the algorithms used to decide which shots to include were biased towards certain types of players. In judging a shot’s quality, the algorithms valued the expressiveness of a player’s gestures and the loudness of the crowd’s cheering after the shot, so more expressive players who gesture more often and more famous players who get louder cheers by default were more likely to be included in the final highlight reels. As a result, the shots included in the highlights were not actually an unbiased summary of the best plays.

Faced with this bias problem, executives at the Durham Club had a decision to make. On one hand, a benefit of the existing system was that it made judgements about the quality of shots based on relatively simple criteria. In order to compensate for the bias, more complex factors would need to be taken into account, which would require the Durham Club to pay GCS a steep price to make the desired changes. Keeping the existing system would mean saving that money for other pressing problems that needed to be solved, and there were plenty. The executives therefore felt a responsibility to the employees of the Durham Club to make this investment only if it was genuinely the right thing to do.

On the other hand, not addressing the bias in this technology could have negative effects. First, fans would be affected because they would not see the actual highest-quality shots. The complaints received were evidence that some fans were already unhappy about the problem. These consequences for the fans could translate into consequences for the Durham Club itself if showing biased, lower-quality highlights continued to disappoint and alienate the fan base, resulting in decreased profit. Also, if fans learned that the Club knew about bias and had not worked to address it, there would be the added cost of negative perception. Finally, there would be negative effects for participating tennis players. Highlights can have a significant impact on exposure, which is generally important for players' careers and more specifically important for obtaining contracts with corporate sponsors. Paying for the fix had the potential to result in benefits for fans, the Club, and the players. In addition to these concerns, the Durham Club executives also felt a responsibility based on the Club's stated mission. They felt that they had made a commitment to hold themselves to the highest possible standard in their presentation of tennis.

In the end, the Durham Club executives paid GCS to fix the bias in the highlight-selecting system. Many agree that since the fix, the highlights have improved significantly in terms of the quality of the included shots and the range of players displayed in them.

Questions for reflection:

1. What were the potential consequences of keeping the current highlight-selecting system?
 - a. Who might have been affected by this decision?
 - b. Which of these consequence(s) do you judge to be the worst?
2. What were the potential consequences of correcting the bias in the system?
 - a. Who might have been affected by this decision?
 - b. Which of these consequence(s) do you judge to be the worst?
3. What other factors besides effects on various parties are involved in the executives' ethical dilemma?
4. How should the consequences of the two courses of action be weighed against one another? Do you think the executives made the right decision in the end?
5. Should the Durham Club have had to take on the full cost of fixing the bias, or should GCS have taken more responsibility? What other information not included in the case study might this depend on?