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Case Study

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Artificial Intelligence: A Bizarre Experience of an Unforgettable Day

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Artificial Intelligence (AI) is slowly becoming part of our daily life. AI based computational photography becoming a norm in smart phones with multiple cameras. Now, it is the new buzzword in photography. Simon Fitzpatrick, Senior Director, Product Management at FotoNation says “It's about taking studio effects that you achieve with Lightroom and Photoshop and making them accessible to people at the click of a button.” The AI based solutions in the field of sports for a wide coverage of on field actions and for further analysis of the match actions by the coaches is getting more popular among the sports professionals and amateurs.

Inverness Caledonian Thistle Football Club (ICTFC) was preparing to witness the memorable moments of the league matches using the newly installed Pixellot camera system at Caledonian Stadium. This is mainly because during this time the entire world was reeling under devastating Covid-19 pandemic. Covid-19 changed the world by imposing many restrictions on the normal life-style of individual people. Social distancing became a norm to avoid the spread of the disease. It brought many changes but in this case study we will discuss the impact of covid-19 on sports sector in general and use of technology in specific. Take the case of football match, during this pandemic time it's become almost impossible to meet the costs to conduct and cover the matches. Normal income is basically from selling of instant and season tickets, and streaming rights to streaming platforms. The positive aspects of all sports is the associated entertainment value for all spectators on the ground and off the ground,

in addition to the training of the future aspirants. To deal with these situations the Inverness Caledonian Thistle Football Club (ICTFC) decided to take the help of technology to track each and every moment of all the matches to make it available to the fans.

The ICTFC availed the services of Pixellot, a well-established global leader in automated sports production. The Pixellot use to offer live streaming, audience reaction clips, editing, and sharing solutions to the professional and amateur sports organizations to enable them a cost-effective solution to cover and monetize their events. Pixellot employs a multi-camera array technology and artificial intelligence to capture all the actions and stream it to the customers.

The ICTFC decided to cover all the matches without involving any cameraman so that they can abide by the Covid-19 protocol and also provide the high-quality match coverage at affordable prices. This was the 24th day of October 2020, the match between Inverness Caledonian Thistle and Ayr United was going on a full stream. Suddenly, the spectators realized that they are often missing the ball and player actions, rather watching only the part of the field where there is no action. This captured the attention of all media.

What exactly happened? The AI camera is programmed to follow the moving ball and can provide a dashing real-time experience to all. Before the match the ICTFC club announced "ICTFC will utilize live footage supplied by the newly installed Pixellot camera system installed at Caledonian Stadium. The Pixellot system uses cameras with in-built, AI, ball-tracking technology to produce live HD footage of all home SPFL Championship matches at Caledonian Stadium, which will then be broadcast directly to ICTFC Season Ticket holders and those purchasing a PPV match via a centrally operated streaming platform at StreamAMG,".

However, during the match between Inverness Caledonian Thistle and Ayr United, the viewers started commenting that they keep on missing their team's goals due to the slapdash performance of the AI based cameras. The camera continuously tracked a bald head as it could not differentiate between the ball and the bald head of the linesman, as the referee's bald head glistening in the late afternoon sun. What exactly

happened that when centre-forward Nikola Todorov scored the team's first goal, the camera kept on mistaking the ball for the bald head on the side lines, denying viewers of the real action while focusing on the linesman instead. This is shown in Exhibit 1 and 2. Until then the club authority never dreamt of the situation of such hilarity.

Now the major question in front of the ICTFC was to take a call on how to respond to the fans so that subsequent matches will not be affected. In addition, they were in a dilemma whether to continue the streaming of the future matches or not possibly by addressing the error of the Pixellot system to perform streaming of live match without such mistake. They have already invested a lot of money on the AI based automation for the streaming of the live matches and amid Covid-19 pandemic there was no immediate solution visible to this problem.

Exhibit 1

The AI cameras at Caledonian Stadium in Inverness, Scotland, kept mistaking this referee's bald head for the soccer ball. A color commentator for the Inverness Caledonian Thistle apologized for the error¹



¹ <https://www.dailymail.co.uk/sciencetech/article-8889809/AI-camera-used-replace-humans-soccer-games-confuses-referees-bald-head-ball.html>

Exhibit 2

Another view of the referee who kept sidetracking the club's cameras².



² <https://www.dailymail.co.uk/sciencetech/article-8889809/AI-camera-used-replace-humans-soccer-games-confuses-referees-bald-head-ball.html>

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