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COVER STORY

ART IS MATH

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Sports Analytics

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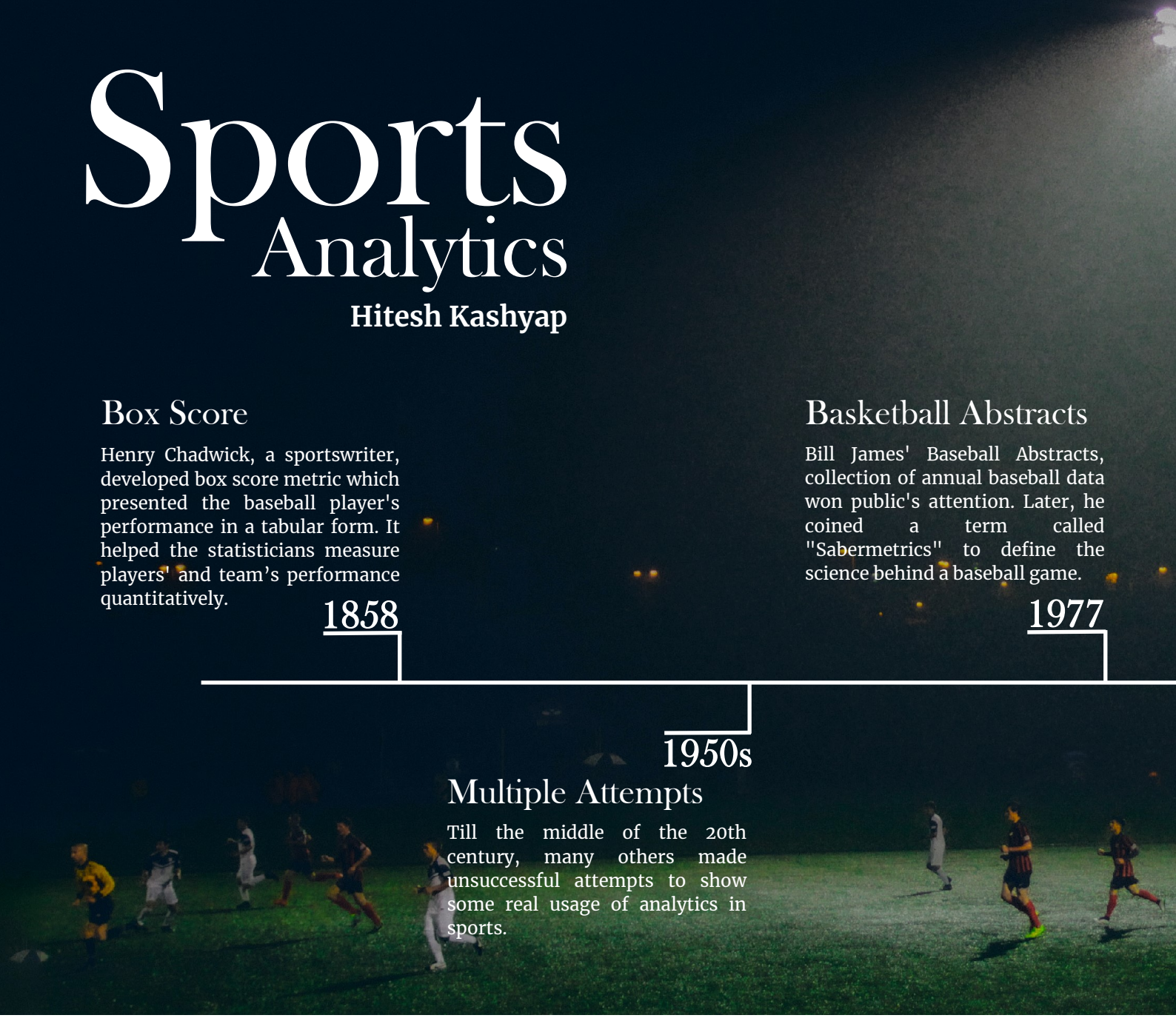

Box Score

Henry Chadwick, a sportswriter, developed box score metric which presented the baseball player's performance in a tabular form. It helped the statisticians measure players' and team's performance quantitatively.

1858

Basketball Abstracts

Bill James' Baseball Abstracts, collection of annual baseball data won public's attention. Later, he coined a term called "Sabermetrics" to define the science behind a baseball game.

1977

1950s

Multiple Attempts

Till the middle of the 20th century, many others made unsuccessful attempts to show some real usage of analytics in sports.

"Dhoni finishes off in style. A magnificent strike into the crowd. India lifts the world cup after 28 years". We still fondly remember the words of Ravi Shastri. Observe that the detail '28 years' emphasizes the rarity of this event and the effort invested to attain such a victory.

Numbers have a special relationship with sports. We still get glued to those startling match statistics and graphics that appear on the screen while our favourite match of cricket or football is on. Don't they add a different dimension to our analysis of the game? What is the underlying technology behind all of this? Well, it is all analytics.

Let us explore how analytics started changing the way we enjoy sports and why it is becoming hugely popular.

We know that human beings have limited capacity to process and generate immediate insights from massive data present in raw form. Processing and presenting this data in tabular or graphical constructs help us observe trends and find valuable insights empowering our decision-making abilities. Advancements in technology and computational capabilities have simplified this process of data analysis. For example, in sports, parameters like weather conditions, recent win/loss

statistics, and players' performance are used to make predictive machine learning algorithms that aid managers in making game-winning decisions. Predicting future scenarios also involves the use of much sophisticated deep learning and cognitive algorithms.

Each team's win speaks volumes and brings added perks like increasing fan base, attracting more sponsors, retaining top players, increasing merchandise sales, and getting concessions in high-quality sports equipment. It also increases the team's confidence and local pride. These are some of the reasons why analytics is being accepted widely by many companies, and the sports analytics market is growing at a rapid rate.

"The frontier of analytics is just beginning, and there is no end in sight to the potential" - Dr. Lynn Lashbrook, Sports Management Worldwide President, and Founder.

Sports Analytics Market

A study published by Grand View Research Inc states that the global sports analytics market size will expand at a CAGR of 31.2% and reach $4.6 billion by 2025. Analytics has also helped in the proliferation of the sports gambling industry. The gambling industry is valued at around $800-$1,000 billion, out of

which sports gambling contributes about 13% of its share. It helps gamblers to analyze massive amounts of data and information to place the right bet.

Many teams and clubs have collaborated with big companies to develop analytical products to help managers in their decision-making process. Real Madrid, one of the most renowned and revered football clubs, utilizes Microsoft Analytical tools to manage its operational activities and players' performance. This tool also helps to maintain clubs' relationships with more than 550 million global fans. Also, Manchester United trusts Aon for planning their game strategy to stay one step ahead in the competition. Some of the works of sports analytics have been so accurate that they have been written in history books.

Bull's eye

There have been many instances in sports where analytics has performed outstandingly. One such incident is when Daryl Morey, General Manager of the Houston Rockets, an American basketball team, found three-pointer shot attempts from corners had a higher chance of success than trying two-pointers shots. The result was that the Rockets broke the record for most 3-point attempts during NBA 2018-19 season. Similarly, ScoreWithData of IBM predicted seven hours before the first quarter -final of the World Cup that Imran Tahir, South African spinner, would become the power bowler. This prediction came out to be accurate, and Tahir won the match for South Africa against Sri Lanka. Today, many professional sports like cricket, basketball, football, hockey, etc., use analytics to maximize their team performance and improve their chances of winning. These sports use different kinds of metrics to measure players' and team performance. Although many sports are utilizing the potential of analytics, some are still critical of adopting this technology.

Challenges for Sports Analytics

Despite growing rapidly, Sports Analytics still faces many challenges. Critics point out that there are certain factors that analytics is not capable of capturing, like player diving in the game, intentionally misleading the opponent, or riling up opponents by yelling/ sledging. They argue that such things can only be captured and processed by humans. However, to a certain extent, analytics can still handle such kinds of unstructured data. Such things are documented using text analytics models, and this unstructured information is converted into standard structured data with rows and columns for processing. Rule-based categorization or machine learning-based models are used to gauge the frequency of words and generate insights. The efficiency of these models can be improved by collecting data from various sources. For example, using scouting reports from different scouts reduces the bias towards any single opinion. Increased research and developments in artificial intelligence would surely help in addressing many of these challenges.

Next in Sports Analytics

Sports analytics has led to a breakthrough revolution in the sports industry, but it still has a long way to go. The day is not far, with the integration of technology and wearables, when analytics would assess the mental and emotional makeup of the player and how it correlates to the player's on-field performance. With recent advancements in technology, sports analytics will evolve manifold in the years to come, and we will experience some of the never-explored dimensions of sports.