A Critical Study on Artificial Intelligence and its Impact on Sports Business

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Abstract:- Artificial Intelligence (AI) has become a bornagain force throughout different industries including the sports business arena. Artificial Intelligence is now being used in sports increasingly due to its capability to provide various advantages in this field such as enhancing athletes performances & health, smooth the way for training & diet programs, assessing games & building approaches, refreeing. scouting & hiring players, forecasting the matches, selling tickets & even the sports journalism. The Global AI in the Sports Industry is anticipated to increase from the numbers 518.8 Million in 2022 to 4.3 Billion Dollars by 2028 at a CAGR of 42.3% over the predicted tenure. By 2030, the worldwide influence of AI is in prospect to attain \$19.9 Billion. As a matter of fact, use of AI makes the sports events & tournaments more professional & the introduction of AI will take physical education to the next level. With the aid of these AI, big data & other facts & figures apparatus schools can initiate a unique & scientific physical education environment. My objectives is to evaluate the existing regulatory framework governing AI & its impacts on sports business, To compare between the countries with regard to AI & its impact on sports business development, To create awareness among the people with regard to AI & its impact on sports business, To understand the disadvantages of AI on sports industry & its negative impacts & To propose different ideas & recommendations can be given on the enhancement of AI & its impacts on sports business. The author has collected 202 samples. The researcher has undertaken the empirical research method. The scope of having advancements in the field of sports & its related business in the upcoming years is possible only via the utilisation of AI tools to compete in bigger stage is purely in the hands of the government of our country & people as in the case of AI there should be a balance between the cons/pros & the development in an arranged manner to get rewards in this particular arena in the near future.

Keywords:- Artificial Intelligence, Sports, Business, Government, Technology.

I. INTRODUCTION

Let me start my research paper with a fantastic quote on AI & its impacts on sports business. "I believe that artificial intelligence in sports will not substitute human intelligence, but it will empower it, making athletes and teams smarter and more competitive." AI is a wing of computer science that aims to make intelligent machineries that can execute tasks that need human intelligence. Good achievements in sports are greatly affected by a dimension of features which is inclusive of age, gender, fear & state of mind, blood lactate concentration, heart rate & perceived exertion rate, sleep standard & recovery, stress levels, physical preparedness & tactical options during the course of tournaments & many others. The historical background of AI & its impact on sports business is that from the sports business point of view it started from the late 20th century & quickened in the 21st Century with the expansion of data analytics, sensor automation & machine learning set of rules. One of the major developments is data explosion as the introduction of digital innovations led to a huge flow of data in sports, grabbing complicated information of athlete performance, game figures & fan involvement numbers. Factors affecting the AI & its impact on sports business is fierce landscape dynamics in the sports field is always inclusive of team performance, player hiring plans & business operations as the sports industry tries to get a good & thick edge via use of AIpowered tactics & talent identification in both on & off the field. The government schemes put in place with regard to AI & its impact on sports business are sponsorship for AI research & development as the government assigns funds for the R&D including the projects aim on AI employment in sports analytics, performance observation & fan involvement. The current trends with regard to AI & its impact on sports business is newly discovered analytics for performance maximisation as sports institutions are gradually using AIadvanced analytics to maximise powered athlete performance. It includes the prognostic modelling for injury precaution, customised training programs based on fingerprint data. The Comparison between the countries with regard to AI & its impact on sports business in USA & UK is that in its adoption of AI in sports business as major sports competitions such as the NFL, NBA, MLB & NHL boardly use AI for player analysis & fan involvement whereas in

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United Kingdom the story is different as AI is specifically utilised in soccer as their clubs maximise revenue enhancing & fan love & support through AI to strive for better performance in their matches as a strategy for success mantra.

≻ Aim:

The Aim of my research is to have a critical study on artificial intelligence & its impact on sports business.

> Objectives

- To evaluate the existing regulatory framework governing artificial intelligence & its impacts on sports business.
- To compare between the countries with regard to artificial intelligence & its impacts on sports business developments.
- To create awareness among the people with regard to artificial intelligence & its impact on sports business.
- To understand the disadvantages of AI on the sports industry & its negative impacts.
- To propose various ideas & recommendations can be given on enhancement of AI & its impacts on sports Business.

II. REVIEW OF LITERATURE

(Lee et al, 2020) This review examines how AI, machine learning, and deep learning are being used to analyse athlete data, optimise training programs, and improve performance.(Iswandi et al, 2020) This review explores how AI is being used in digital sports marketing and management, focusing on areas like fan engagement, targeted advertising, and content personalization.(Kuan, 2019) This review discusses the various applications of AI in competitive sports, including performance analysis, game strategy optimization, and automated officiating. It also explores potential concerns like job displacement and the impact on the human element of sports.(Wang et al, 2018) This review focuses on the development and application of AI in China's sports industry, particularly in analysing athlete performance and movement patterns. (Bartlett, 2006) This older review provides a historical perspective on the potential of AI in sports biomechanics, discussing the challenges and limitations of early AI applications in this area. (Trail et al, 2010) While not specifically focused on AI, this review provides a valuable foundation for understanding the importance of fan engagement in the sports business. It can be used to frame how AI can be leveraged to enhance this aspect. (Clemente et al, 2019) This review explores the use of big data analytics in sports, which is a key driver behind the development of AI applications in the industry. Understanding how big data is used can provide context for the role of AI in processing and analysing this data. (Bryson et al, 2020) This review delves into the potential for bias in AI algorithms used in sports, particularly in areas like player recruitment and officiating. It's crucial to understand these challenges for responsible AI implementation. (Jones and Davies, 2019) This review explores the broader ethical considerations surrounding AI in sports, including data privacy, player autonomy, and the potential for manipulation of competition. (Kavoura and

Kokka, 2020) While not specifically focused on AI, this review examines potential changes in the sports industry workforce due to technological advancements. It can be used to consider the impact of AI on job roles and necessary workforce adaptations. (David Shvets et al. 2017) This review explores the growing role of big data and machine learning in sports analytics, which forms the foundation for many AI applications in the industry. (**Rui Zhang et al, 2020**) This technical review provides an in-depth overview of current AI techniques deployed in sports. It delves into areas like computer vision for player tracking, natural language processing for game analysis, and reinforcement learning for optimising strategies. (Andreia Martins et al, 2022) This review focuses specifically on how AI is shaping the fan experience in sports. It explores topics like personalised content delivery, interactive experiences, and AI-powered chatbots for customer service. (Luis Garrido-Cumbrera et al, 2021) This review explores how AI can be used to predict and prevent athlete injuries. It analyses machine learning techniques for identifying patterns and risk factors in player data. (Michael McCann, 2020) This review examines the legal implications of AI in sports, including issues like ownership of data, liability for AI-driven decisions, and the need for regulatory frameworks. (Zivue Wang et al, 2022) This review explores the unique applications of AI in eSports, such as developing competitive AI agents, analysing game strategies, and enhancing live streaming experiences. (Stefan Szymanski, 2021) This review explores the potential for AI to be misused for match-fixing in sports. It analyses potential vulnerabilities and proposes strategies for mitigating this risk. (Hyung-June Kim et al, 2019) This review examines how AI is transforming sports broadcasting. It explores areas like automated highlight generation, personalised commentary tracks, and AI-powered virtual reality experiences. (Daniel Funk et al, 2023) This emerging area of research explores the potential psychological impact of AI on athletes, including issues like trust in AI-generated insights, pressure to perform based on analytics, and the potential for dehumanisation. (Yannick Kluge, 2022) This review explores the ethical and regulatory challenges posed by AI in eSports, particularly regarding the potential for developing AI-powered cheating programs and the need for fair play in competitive gaming.

III. METHODOLOGY

The Research Method used here is the Empirical Research Method. A total of **200** responses are collected. A Questionnaire was prepared in the Google Forms & it was emailed to my Friends, Relatives & Families. They are requested by the researcher to forward the link to their closest ones. The responses were collected from the people living inside Tamil Nadu such as Poonamalle, Anna Nagar etc as well as other parts of India. The Questions are The integration of AI technologies like machine learning systems impact the accuracy & effectiveness of player performances analysis in professional sports, AI-powered fan engagement platforms have effect on fan loyalty, satisfaction & revenue generation for sports organisations, AI-driven ticket pricing methods strike attendence rates, revenue generation & fan accessibility to sporting events, Long-term implications of AI adoption in

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sports business is much more in the areas of job roles, industry competitiveness & overall fan experiences in the future & AI-driven data analytics & predictive modelling be utilised to forecast sports industry trends, anticipate market demand & inform strategic decision-making for sports business stakeholders. Their responses are collected by the researcher by using the SPSS Software. The Independent variables are Age, Gender, Place of Residence, Educational Qualification, Occupation & Marital Status & the Dependent Variables are The integration of AI technologies like machine learning systems impact the accuracy & effectiveness of player performances analysis in professional sports, AIpowered fan engagement platforms have effect on fan loyalty, satisfaction & revenue generation for sports organisations, AI-driven ticket pricing methods strike attendence rates, revenue generation & fan accessibility to sporting events, Long-term implications of AI adoption in sports business is much more in the areas of job roles, industry competitiveness & overall fan experiences in the future & AI-driven data analytics & predictive modelling be utilised to forecast sports industry trends, anticipate market demand & inform strategic decision-making for sports business stakeholders. The tools used in this research are Simple Bar Graph, Clustered Bar Graph, One-Way Anova, Chi-Square, Means Plot & Independent Sample T-Test respectively.

IV. RESULTS & INTERPRETATIONS

Simple Bar Graph



Fig 1 Simple Bar Percent of Age

• Legend: Fig 1 clearly shows about the % of people who have responded to the Questionnaire in relation to their respective age.

Simple Bar Graph



Fig 2 Simple Bar Percent of Gender

• Legend: Fig 2 clearly shows about the % of people who have responded to the Questionnaire in relation to their respective gender.



➤ Simple Bar Graph

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Fig-3 Simple Bar Percent of Educational Qualification

- Legend: Fig 3 clearly shows about the % of the people who have responded to the Questionnaire in relation to their respective educational qualification.
- Clustered Bar Graph



Fig 4 Clustered Bar Graph

• Legend: Fig 4 clearly shows about the % of people who have responded to the question of the integration of AI technologies like machine learning systems impacting the accuracy & effectiveness of player performances analysis in professional sports in relation to their respective Educational Qualification.

Clustered Bar Graph



- Legend: Fig 5 clearly shows that the % of people who have responded to the question of AI-Powered fan engagement platforms have an effect on fan loyalty, satisfaction & revenue generation for sports organisations in relation to their respective Occupation.
- Clustered Bar Graph



Fig 6 Clustered Bar Graph

• Legend: Fig 6 clearly shows about the % of people who have responded to the question of AI-driven data analytics & predictive modeling being utilised to forecast sports industry trends, anticipate market demand & inform strategic decision-making for sports business stakeholders in relation to their respective Place of Residence.

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Clustered Bar Graph



- Legend: Long-term implications of AI adoption in sports business is much more in the areas of job roles, industry competitiveness & overall fan experiences in the future in relation to their respective Age Groups.
- > One-Way Anova

		ANOVA	1			
The integration of A	technologies like	machine l	earning systems in	npact the ad	curacy &am	o; effectiveness of player performances analysis in professional sports.
	Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	4.975	4	1.244	.800	.526	
Within Groups	303.020	195	1.554			
Total	307.995	199				

Fig 8 One-Way Anova

➤ Means Plot



Fig 9 Means Plot

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• **Inferences:** The Null Hypothesis is Accepted. So, there is no difference between the question of AI-powered fan engagement platforms have an effect on fan loyalty, satisfaction & revenue generation for sports organisations & Gender of people. So, there is no significant relationship between the two variables.

➢ Chi-Square Tests

			Pla	ce of Residence	е	
		Urb	an Areas	Semi Urban Areas	Rural Areas	Total
Al-driven ticket pricing	Strongly Agree		13	6	16	35
methods strike attendance rates	Agree		8	2	25	35
revenue generation	Neutral		17	6	34	57
& fan accessibility to	Disagree		18	8	44	70
opening erenite.	Strongly Disagr	ee	0	0	3	3
Total			5.0	22	4.00	200
Chi	-Square Tests		56	22	122	200
Chi	-Square Tests Value	df	Asymptotic Significance (2-sided)	22	122	200
Chi Pearson Chi-Square	-Square Tests Value 7.626 ^a	df 8	Asymptotic Significance (2-sided) .47		122	200
Pearson Chi-Square Likelihood Ratio	-Square Tests Value 7.626 ^a 8.711	df 8 8	Asymptotic Significance (2-sided) .47	17	122	
Pearson Chi-Square Likelihood Ratio Linear-by-Linear Association	-Square Tests Value 7.626 ^a 8.711 1.738	df 8 8 1	Asymptotic Significance (2-sided) .47 .36 .18	1 7 7	122	200

Fig 10 Chi-Square Tests

- Null Hypothesis (H0): There is a significant association between the Place of Residence & AI-driven ticket pricing methods strike attendance rates, revenue generation & fan accessibility to sporting events.
- Alternative Hypothesis (H1): There is no significant association between the Place of Residence & AI-driven ticket pricing methods strike attendance rates, revenue generation & fan accessibility to sporting events.

> Results

In Fig 1, From the Above Simple Bar Graph, we can understand that people who are between the age group of 41-50 years have responded to the questionnaire in more numbers than people belonging to other age groups. Since, the & of the people who are less than 18 years is 20.00%, % of people who are in between 19-30 years is 9.50%, % of people who are between 31-40 years is 15.50%, % of people who are in between 41-50 years is 39.00% & % of people who are above 50 years is 16.00% respectively. In Fig 2, From the Above Simple Bar Graph, we can understand that male have responded to the questionnaire in more numbers than females & transgenders. Since, the % of the people who are males are 51.00%, % of people who are females are 28.50% & % of people who are transgender are 20.50% respectively. In Fig 3, From the above Simple Bar Graph, we can understand that the people whose educational qualification is PG have responded in more numbers than

people with other educational qualifications. The % of people whose educational qualification is SSLC is 6.50%, % of people whose educational qualification is HSC is 13.50%, % of people whose educational qualification is UG is 20.50%, % of people whose educational qualification is PG is 31.50% & % of people whose educational qualification is Diploma is 28.00% respectively. In Fig 4, From the above Clustered Bar Graph, we can understand that many people had a neutral opinion with regard to the question of the integration of AI technologies like machine learning systems impacting the accuracy & effectiveness of player performance analysis in professional sports than other opinions. The % for option strongly agree as people studying in SSLC is 1.00%, % for option strongly agree as people studying in HSC is 1.00%, % for option strongly agree as people studying in UG is 5.00%, % for option strongly agree as people studying in PG is 6.50%, % for option strongly agree as people studying in Diploma is 3.50% respectively. The % for option agree as people studying in SSLC is 2.50%, % for option agree as people studying in HSC is 5.00%, % for option agree as people studying in UG is 5.00%, % for option agree as people studying in PG is 8.50% & % for option agree as people studying in Diploma is 8.00% respectively. The % for option neutral as people studying in SSLC is 2.00%, % for option neutral as people studying in HSC is 4.50%, % for option neutral as people studying in UG is 6.00%, % for option neutral as people studying in PG is 10.50% & % for option neutral as people studying in Diploma is 8.00%, The % for

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option disagree as people studying in SSLC is 1.00%, % for option disagree as people studying in HSC is 1.00%, % for option disagree as people studying in UG is 3.00%, % for option disagree as people studying in PG is 3.00% & % for option disagree as people studying in Diploma is 1.50% respectively. % for option strongly disagree as people studying in SSLC is 1.00%, % for option strongly disagree as people studying in HSC is 2.00%, % for option strongly disagree as people studying in UG is 2.00%, % for option strongly disagree as people studying in PG is 2.50% & % for option strongly disagree as people studying in Diploma is 7.00% respectively. In Fig 5, From the above Clustered Bar Graph, we can understand that many people had an agree opinion with regard to the question of AI-powered fan engagement platforms having more effect on fan lovalty, satisfaction & revenue generation for sports organisations than other opinions. The % for option strongly agree as people whose occupation is Private Sector Enterprises is 1.00%, % for option strongly agree as people whose occupation is Public Sector Enterprises is 6.00%, % for option strongly agree as people whose occupation is Own-Business is 2.50%, % for option strongly agree as people whose occupation is Home-Maker is 0.00% & % for option strongly agree as people who is yet to be employed is 2.50% respectively. The % for option agree as people whose occupation is Private Sector Enterprises is 4.50%, % for option agree as people whose occupation is Public Sector Enterprises is 12.00%, % for option agree as people whose occupation is Own-Business is 10.00%, % for option agree as people whose occupation is Home-Maker is 0.50% & % for option agree as people who is yet to be employed is 8.00% respectively. The % for option neutral as people whose occupation is Private Sector Enterprises is 10.00%, % for option neutral as people whose occupation is Public Sector Enterprises is 8.50%, % for option neutral as people whose occupation is Own-Business is 5.50%, % for option neutral as people whose occupation is Home-Maker is 1.00% & % for option neutral as people who is yet to be employed is 6.50% respectively. The % for option disagree as people whose occupation is Private Sector Enterprises is 6.00%, % for option disagree as people whose occupation is Public Sector Enterprises is 4.50%, % for option disagree as people whose occupation is Own-Business is 5.00%, % for option disagree as people whose occupation is Home-Maker is 0.00% & % for option disagree as people who is yet to be employed is 3.00% respectively. The % for option strongly disagree as people whose occupation is Private Sector Enterprises is 0.50%, % for option strongly disagree as people whose occupation is Public Sector Enterprises is 0.50%, % for option strongly disagree as people whose occupation is Own-Business is 1.00%, % for option strongly disagree as people whose occupation is Home-Maker is 0.00% & % for option strongly disagree as people who is Yet to be Employed is 1.00% respectively. In Fig 6, From the above Clustered Bar Graph, we can understand that many people said their opinion as strongly disagree with regard to the question of AI-driven data analytics & predictive modelling be utilised to forecast sports industry trends, anticipate market demand & inform strategic decision-making for sports business stakeholders than other opinions. The % for option strongly agree as people whose place of residence is urban areas is 8.00%, %

for option strongly agree as people whose place of residence is semi-urban areas is 3.00% & % for option strongly agree as people whose place of residence is rural areas is 13.00% respectively. The % for option agree as people whose place of residence is urban areas is 5.00%. % for option agree as people whose place of residence is semi-urban areas is 1.00% & % for option agree as people whose place of residence is rural areas is 11.00% respectively. The % for option neutral as people whose place of residence is urban areas is 5.00%, % for option neutral as people whose place of residence is semi-urban areas is 2.00%, % for option neutral as people whose place of residence is rural areas is 8.00% respectively. % for option disagree as people whose place of residence is urban areas is 4.50%, % for option disagree as people whose place of residence is semi-urban areas is 1.50% & % for option disagree as people whose place of residence is rural areas is 9.50% respectively. The % for option strongly disagree as people whose place of residence is urban areas is 5.50%, % for option strongly disagree as people whose place of residence is semi-urban areas is 3.50% & % for option strongly disagree as people whose place of residence is rural areas is 19.50% respectively. In Fig 7, From the Above Clustered Bar Graph, we can understand that many people said disagree as their opinion with regard to the question of long-term implications of AI adoption in sports business is much more in the areas of job roles, industry competitiveness & overall fan experiences in the future than other opinions. The % for option strongly agree as people who are less than 18 years are 6.00%, % for option strongly agree as people who are 19-30 years is 1.50%, % for option strongly agree as people who are 31-40 years are 4.00%, % for option strongly agree as people who are 41-50 years are 8.00% & % for option strongly agree as people who are above 50 years are 1.00% respectively. The % for option agree as people who are less than 18 years are 3.00%, The % for option agree as people who are 19-30 years are 2.00%. The % for option agree as people who are 31-40 years are 1.00%, The % for option agree as people who are 41-50 years are 8.00% & The % for option agree as people who are above 50 years are 3.00% respectively. The % for option neutral as people who are less than 18 years are 2.50%, % for option neutral as people who are 19-30 years are 1.00%, % for option neutral as people who are 31-40 years are 3.50%, % for option neutral as people who are 41-50 years are 4.00% & % for option neutral as people who are above 50 years are 1.50% respectively. The % for option disagree as people who are less than 18 years are 5.50%, % for option disagree as people who are 19-30 years are 2.50%, % for option disagree as people who are 31-40 years are 3.00%, % for option disagree as people who are 41-50 years are 11.50% & % for option disagree as people who are above 50 years are 7.00% respectively. The % for option strongly disagree as people who are less than 18 years are 3.00%, The % for option strongly disagree as people who are 19-30 years are 2.50%, The % for option strongly disagree as people who are 31-40 years are 4.00%, % for option strongly disagree as people who are 41-50 years are 7.50% & % for option strongly disagree as people who are above 50 years are 3.50% respectively. In **Fig 8**, The Null Hypothesis is Accepted. So, there is no difference between the question of AI-powered fan engagement platforms have an effect on fan loyalty,

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satisfaction & revenue generation for sports organisations & Gender of people. So, there is no significant relationship between the two variables. In **Fig 9**, **Null Hypothesis (H0):** There is a significant association between the Place of Residence & AI-driven ticket pricing methods strike attendance rates, revenue generation & fan accessibility to sporting events.

• Alternative Hypothesis (H1): There is no significant association between the Place of Residence & AI-driven ticket pricing methods strike attendance rates, revenue generation & fan accessibility to sporting events.

V. DISCUSSIONS

In Fig 1, The people who are between 41 to 50 years have responded to the questionnaire as compared to other age group people. This is because the people who are between 41-50 years have more knowledge about the sports & other new things like AI as they learn from the newspaper & some through their experiences as they have more time as compared to other age groups. Since, the people who are less than 18 years have less time in knowing the outside world because of so many pressure especially the education & school pressure & people of other age groups also face the problem of stress in the form of jobs, colleges which keeps them always busy in that in order to cement a better future for themselves & their families. In Fig 2, The male members have responded to the questionnaire more than other genders that are female & prefer not to say. This is because the male members are given more freedom to learn new things from both their families & society as males are often considered as superior to females in every fields till now due to a standard social stigma that is being present & moreover, they are considered as the lion by the family members & females on the other hand now even though they go to work & earn there is always a restriction being placed by their family members to explore & get knowledge of AI even though it is a hot topic as they are always placed under a radar of constraints whereas the transgender are not even considered by the society & they also on the verge of being destroyed by the society as they are unable to create an identity for themselves till now. So, it is always an impossible task to know these things. In Fig 3, The people who are pursuing PG as their educational qualification have responded more to the questionnaire than other people with different educational qualifications. This is because the people who are pursuing PG as a educational Qualification usually gets vast opportunities to have a detailed study on AI & sports industry as in PG actually appreciates more practicals & research than theory-based education but the people who are pursuing SSLC, HSC, Diploma & UG cannot get a proper knowledge on these things because in case of SSLC the students are always asked to focus on studies by the parents & school to get good marks & to get admissions in colleges as they will be quite busy with the studies most of the time which curtails their free time to know about the world around them & the same happens in the case of SSLC pursuing students as well. But the people who are pursuing UG & Diploma are quite different as there people have time to learn but other responsibilities like exams & family problems restricts them to proceed further knowledge-wise.

In **Fig 4**, Most people have responded to the question of the integration of AI technologies like machine learning systems impact the accuracy & effectiveness of player performances analysis in professional sports by stating a neutral opinion since according to them the inclusion or mixing of AI technologies like machine learning systems influence the accuracy & effectiveness but at the same time it also a cretes a dip in the player performances due to glitch in these systems as they may provide wrong results which would have a massive impact on performance of player in the professional sports which may ultimately end his career in the field. In Fig 5, Most people have responded to the question of AI-powered fan engagement platforms have effect on fan loyalty, satisfaction & revenue generation for sports organisations by stating an agree opinion as people think that AI powered fan involvement podium will drastically affect the fan loyalty as fan loyalty is very much important for a team to succeed for example RCB & the satisfaction that people get from cheering loudly for their respective teams from the stadium stands will not be attained if AI comes in & revenue generation will go down to zero if the people does not buy any products & things during the match or before the match as AI will perform all things which in turn leads to unemployment. In Fig 6, Most people have responded to the question of AI-driven data analytics & predictive modelling be utilised to forecast sports industry trends, anticipate market demand & inform strategic decision-making for sports business stakeholders by stating strongly disagree as their opinion as they think that these AI-driven data analytics & predictive modelling that may be used predict sports industry trends may sometimes give away unrelated & wrong answers to the ongoing sports industry trends as market demands changes over time it may difficult to accurately show things or make up one & the decision-making for the sports business stakeholders mainly depends on the demands & reach of sports among the people. In Fig 7, Most people have responded to the question of long-term implications of AI adoption in sports business is much more in the areas of job roles, industry competitiveness & overall fan experiences in the future by stating disagree as their opinion as the people say that there is a no need to have a long-term implications of AI Adoption in sports business will definitely bring down the human work in the fields of job roles, industry competitiveness will be there but the human resource have more tactics in hand than AI to improve the business & overall fan experience will be good if there is no AI as its application in every field will automatically destroy the human race in the near future. In Fig 8, The Null Hypothesis is Accepted. So, there is no difference between the question of AI-powered fan engagement platforms have an effect on fan loyalty, satisfaction & revenue generation for sports organisations & Gender of people. So, there is no significant relationship between the two variables. In Fig 9, Null **Hypothesis** (H0): There is a significant association between the Place of Residence & AI-driven ticket pricing methods strike attendance rates, revenue generation & fan accessibility to sporting events. Alternative Hypothesis (H1): There is no significant association between the Place of Residence & AIdriven ticket pricing methods strike attendance rates, revenue generation & fan accessibility to sporting events.

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VI. LIMITATIONS

One of the Limitations of this survey is its size of 200 responses which is not enough to draw conclusions for the entire population of 1,30 Crores in the country & since their total population count differs drastically & in that survey 50% of the population are of young age & middle-aged people which makes it even more difficult for the researcher for extrapolation.

VII. SUGGESTIONS

As far as this research is concerned it speaks about Artificial Intelligence & its impact on sports business. AI has a very important role to play in the field of sports & its business as it helps the sports to enter into the next level as it allows for performance analysis to be done by AI powered tools to assess the speed, accuracy & edurance. So, there is a need to use these tools in a systematised manner so that it would offer long-lasting & effective results in the future. But on the other hand it also create a ruckus in data being provided as the machines has the tendency to give information that is inaccurate in many situations that would badly impact the progress in the game & it may also help in injury prevention as it uses the formulas to detect biomechanics & analyse the patterns that may help occur injuries. As a most important suggestion from my side, there is a need for the government to introduce various policies to restrict the overuse of AI in different industries at the same time which may have the ability to make humans & their brains useless & dead as overtechnology leads to the destruction of the world. Even though society is progressing with time, new technologies are also finding their place much faster than previous decades. So, it is important for the people to understand the technology & make use of them in a fair manner to leave something for the future generations as the natural resources are being destroyed to welcome technology in different forms that are quite interrelated to each other.

VIII. CONCLUSIONS

AI is considered to be an important tool that is being used in various industries including sports industry or business. AI makes the work of humans much easier in one way but at the same time it may become difficult for the humans in the near future as there would be no employment available for them to perform. Sports business is a fast moving & changing business as it is purely based on audience & sponsorships. As a conclusion, AI is deeply influencing the above-mentioned business in various domains as it helps in promoting the sports business by improving the players performance, increasing fan engagement, maximising business operations & establishing innovations etc. Since, the sports business is revolutionising much faster than other industries as it is a non-profit industry but now this is not the case as it is now changed to a profit-earning business. The world is under the need to run after technology to get to a better stage. So, it is our general public & government responsibility to make sure that these AI & related technologies are not being misused & utilised in a wrong

manner. If done so then a hefty price has to be paid by mankind as the time passes by.

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REFERENCES

- [1]. Lee, S., Kim, H., & Kim, D. (2020). The Application and Impact of Artificial Intelligence on Sports Performance Improvement: A Systematic Literature Review.
- [2]. Iswandi, A., Robby, R., & Mulyana, C. (2020). Literature review on the relationship between Artificial Intelligence Technologies with Digital Sports Marketing and Sports Management. Ejournal Universitas Majalengka, 5(3), 425-434.
- [3]. Kuan, Y-F. (2019). The Effects of Artificial Intelligence on Competitive Sports. Clark Digital Commons.

https://commons.clarku.edu/sps_masters_papers/86/

- [4]. Wang, Z., Zhu, J., & Yang, S. (2018). Summary of the Research Status of Artificial Intelligence in Sports Performance Analysis of Athletes. Science China Press.
- [5]. Bartlett, R. (2006). Artificial intelligence in sports biomechanics: New dawn or false hope? Journal of sports science & medicine, 5(2), 130-138.
- [6]. Trail, G., McCullough, B., & Wright, M. (2010). Fan Engagement in the Digital Age: A Review of Literature. Sport Management Review, 13(3), 213-228.
- [7]. Clemente, F. M., Martins, H. M., Mendes, B., & Conceição, L. O. (2019). Big Data in Sports Analytics: A Literature Review. Sports Medicine, 49(6), 967-985.
- [8]. Bryson, A., Bryson, S., & Loland, S. (2020). Algorithmic bias in sport: A critical review. Sport, Ethics and Philosophy, 14(2), 167-183.
- [9]. Jones, N., & Davies, S. (2019). The Ethics of Artificial Intelligence in Sport. International Journal of Sport Policy and Politics, 11(2), 232-248.
- [10]. Kavoura, A., & Kokka, I. (2020). The Future of Work in Sports: A Delphi Study. Sport Management Review, 23(2), 222-235.
- [11]. Shvets, D., Camerieri, A., & Danziger, J. N. (2017, October 24). Moneyball and Beyond: Big Data, Machine Learning, and the Future of Sports Analytics. Harvard Business Review.
- [12]. Zhang, R., Sun, Y., Fan, J., & Chen, Y. (2020, November 19). AI and Sport: A Survey on the State of the Art. arXiv. arXiv:2011.09451: https://arxiv.org/abs/2011.09451
- [13]. Martins, A., Raposo, A., & Colaço, F. (2022). The Impact of Artificial Intelligence on the Fan Experience in Sports. International Journal of Sports Marketing and Sponsorship, 23(4), 382-398.
- [14]. Garrido-Cumbrera, M., López-Valenciano, A., & Moreno-Ruiz, C. (2021). Artificial Intelligence for Injury Prediction in Sports. Sports Medicine, 51(10), 2687-2702.
- [15]. McCann, M. (2020). The Legal Challenges of Artificial Intelligence in Sports. Journal of Law and Sports, 11(1), 1-24.

ISSN No:-2456-2165

- [16]. Wang, Z., Li, J., & Li, Y. (2022). The Impact of Artificial Intelligence on eSports: A Review. Entertainment Computing, 33, 100618.
- [17]. Szymanski, S. (2021). Artificial Intelligence and Match-Fixing in Sports: A Threat Analysis. Journal of Sports Analytics, 7(2), 112-122.
- [18]. Kim, H.-J., Kim, K.-I., & Kim, J.-H. (2019). The Role of Artificial Intelligence in Sports Broadcasting: A Review. International Journal of Multimedia and Ubiquitous Engineering, 14(3), 233-243.
- [19]. Funk, D., Small, A., & Hatzigeorgiadis, A. (2023). The Psychological Impact of Artificial Intelligence on Athletes. Journal of Applied Sport Psychology, 35(1), 78-92.
- [20]. Kluge, Y. (2022). Artificial Intelligence and Esports Doping: A Discussion on the Ethical and Regulatory Issues. Sport, Ethics and Philosophy, 16(2), 231-247.