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Proposed Model for cognizance of NLP and NLU towards Enhancement in Sports

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Abstract

The sportsman is an amalgamation of a sound mind in cognizance with a healthy body. In the Indian context, most of the sports people are from rural areas with non-english speaking backgrounds. Thus, they face trouble in executing the strategic moves and commands given by the coaches in various sports facilities. In this research paper, the relationship of NLP (Neuro-Linguistic Programming) to sports and NLU (Natural Language Understanding) is explored towards improvisation of player's performance in the game. The cognizance of NLP-NLU helps the sportsperson in executing strategic commands from the coach. The intricacies of the webcast and information retrieval using the NLU can reduce the stress of not understanding the jargon and enhance the thrust to involve in the gaming strategies.

Keywords: NLP (Neuro-Linguistic Programming), NLU (Natural Language Understanding), Sports

Introduction

The key to success in any dimension of life is motivation to achieve the goal. We know the sports person needs to use the power of the mind and healthy body to reach the peak of performance and achieve success. Neuro-Linguistic Programming (NLP) is an approach that acts on the sportsperson's psychological bent of mindset. It consists of various types of statements and beliefs designed to practice in a pseudo-scientific manner. It helps in resolving the contradictions and falsified images in the mind, e.g. "Non-performing player" is a torturing comment to any sportsperson's mind, and usually said when the performance is not up to the mark in that game. There could be 'n' number of reasons, but it's a harsh

reality that in the moment of the game it is been heard from the same people who were praising in the last game and so on.

As we know, Neuro-Linguistic Programming (NLP) is used successfully to develop and enhance some skills towards effective communication with the coach, services, team members, and others. Secondly, rapport building amongst all the essential entities in the environment. It helps in overcoming sports phobias and bad memories. The next achievement is towards setting goals and attaining new ones through different models. All these points are needed to be incorporated using physiology amongst the sports people effectively to create positive shifts in their gaming strategies and experiences while identifying the strength and weaknesses of the player or the team in concern.

Secondly, most Indian sportspersons are not having an English-speaking background, and the instructions assigned by the foreign coach are in the English language most of the time. This is a big challenge, and our model stands out

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to provide a meaningful outcome to the sportsperson using Natural Language Understanding as a part of the smart gadget being used by the player. As per the recent updates, we know that natural-language understanding (NLU) is an applied part of natural language processing using a variety of computer or mobile-based applications. Now in this proposed model the complex messages of a coach can be made understood by the player using an earpiece engaged with the application running on a mobile phone.

There are three pillars namely “Subjectivity”, “Consciousness”, and “Learning” used towards the establishment of Neuro-Linguistic Programming (NLP). As the different sports have different requirements and in terms of subjectivity it needs separate dimensions and a separate line of consciousness and learning as well. As per recent trends, the usefulness of wearable technology is incremental in recent years, and sports persons are adopting wearing fitness devices like smartwatches, fitness bands, etc. in cognizance of these the hearing devices can provide a triangulation effect towards understanding the instruction given.

The approach in this model is looking for the significance of wearable devices and the ontology developed using the components used in wearable technology. The sensor network helps in integrating nodes over the device body for constant monitoring of the emotions of the sports person in concern and incorporates the melancholy radar of facial expressions and gesture recognition. This is supposed to help maintain rapport as in neuro-linguistic programming (NLP) it is most important to gain trust for the impact of discussion. The rapport between the sports person and his/ her coach/ sports psychologist is extremely important. Similarly, rapport is equally important in the context of team games.

Review of Literature

The research framework was purposefully designed to intrude on non-invasively the postures of athletes playing using computer vision and wearable devices. It analyses the postures and gestures using a proposed framework that predicts the injury in advance depending upon the moves of the respective player^[1]. The most important part of the proposed model for analysing the sports injury amongst soccer players is to analyse and then motivate to keep the player engaged in the game while keeping the player away from the game for that instance. In this work, the impact

of injury affects the motivational impact on the player under various circumstances^[2]. This research proposed the benefits of neuro-linguistic programming amongst the athletes, this model enabled the practitioners, coaches, and sports psychologists to classify the experiences amongst athletes and respond to the needful issues more effectively^[3].

This research work has finally provided the conclusion that training with strategies designed using neuro-linguistic programming increases self-efficiency, and sports self-confidence, and enhances sports performance amongst sportspersons and veterans even though they have disabilities^[4]. This research shows that even when the athletes experience negative thoughts and also deal with anxiety-related issues, it is emotionally exhausting to perform in training and competition. The intervention using NLP reflected a positive framework of strategies for helping the athletes. The NLP-based intervention helped the athletes and sportsperson to deal with negative thoughts of their previous experiences and improve the state of anxiety to compete again in the upcoming competition^[5]. This research work has worked on the impact of psychoeducation amongst cricket players using NLP and found satisfactory results in boosting the morale and sense of competition^[6, 9].

This research has emphasized the use of NLP in some specific aspects of judo training to achieve the performance capacity components like visual distinctions, auditory distinctions, kinaesthetic distinctions, and gustatory and olfactory distinctions of the players representing the judo team in Romania^[7]. As it's proven that attention to the player's performance is the most important aspect, this research work worked upon and proved that sports anxiety is associated with exercise, indicating anxiety, worry, and panic experienced by athletes before competing. As sports anxiety has the maximum possibility of affecting the performance of athletes in competition, using NLP the same shall be used to provide instructions and reduce distress^[8].

While referring to the instructions of the AI systems getting updated with the use of NLU driven from Natural Language Processing (NLP). Text summarization plays a pivotal role in natural language understanding (NLU) and information retrieval. Nowadays, automatic text summarization makes people efficiently and effectively handle various points of instructions and serve less time in

the decision-making process. The primary objective of this research work is to propose a methodology to address the problem of summarization for Tamil sports news which can automatically create an extractive summary for the news data with the use of Natural Language Processing (NLP) and a generic stochastic artificial neural network which could be helpful to inform all the sports enthusiasts with better information^[10]. In this research the emphasis is on summarization of sentences used and information extraction oriented to live sports text, it can ease out the life of sports persons and enthusiasts who don't know the literal meaning of the jargon used during real-time commentary^[11].

Now, as we know in AI-based techniques a huge cost is involved, in this research, the task of detecting entities in input user utterances, which is a key component of natural language understanding (NLU) systems. The researchers describe Bag of Experts (BoE) architectures for model reuse for both LSTM and CRF-based models for managing the annotation costs used in labeling data for training slot tagging models increase rapidly as the number of domains grows^[12]. Now the live webcast is being used for sports news generation and using NLU the tough rules or gaming strategies are reduced to help understood by the common man in this research work^[13].

Most of the upcoming trend in China and Taiwan has been given with the use of NLU in the information retrieval and broadcasting procedures^[14]. This research work proposed simplified, fully observable systems that reflect the properties for the curation of soccer players' real-time commentaries using natural language processing and understanding while accompanied by discrete events such as a team scoring goals, switching players, or being penalized with cards. The enhanced descriptions of state while avoiding the complexities of many other fans with real-time experiences^[15].

Proposed Model

The proposed model explained in Figure 1 is designed to induce psychoeducation amongst sportspersons to enhance the performance capacity components like visual distinctions, auditory distinctions, kinaesthetic distinctions, and gustatory and olfactory distinctions of the players. The summarization of the instructions using NLU techniques using Conditional Random Fields (CRF) and a Generative Pre-trained Transformer (GPT-3) shall reduce the distress amongst the players while understanding a foreign language and the experience shared by the coach with a different language in Stress-Free Sports Environment (SFSE).

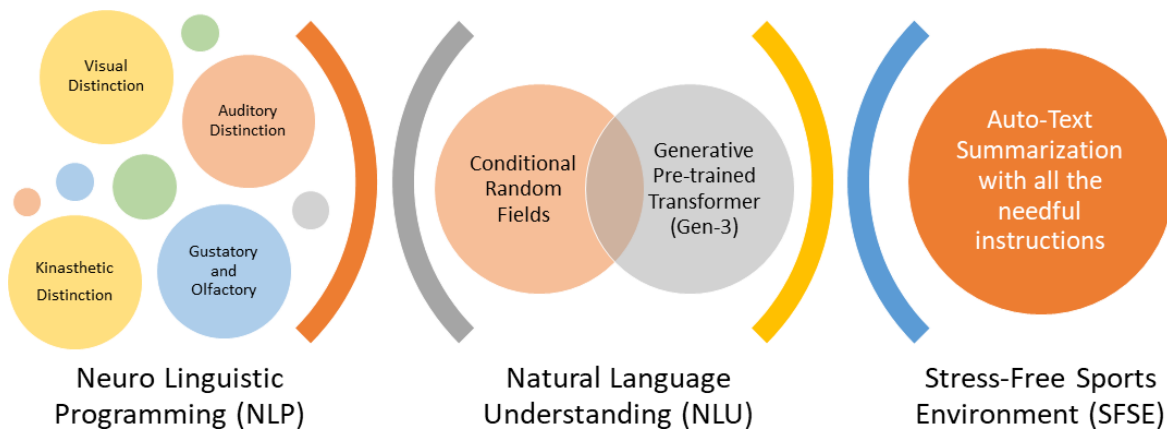


Figure 1: Stree-Free Sports Environment (SFSE)

Conclusion

This research work has modeled the congruency amongst different dimensions of the psychological perspectives of the sports person. It has created a cognizance of two different techniques for creating a better and stress-free environment for not only the players but for the sports enthusiasts as well.

Future Scope

This research work can be further propagated to design the model for creating a better and stress-free environment using different soft computing techniques for the implementation.

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