Title

Training Recommendation System for Amateur Boxers of Kathmandu, Nepal (Boys Aged 15–23)

Introduction

Boxing is becoming an increasingly popular sport among young boys in Kathmandu, Nepal, especially those aged between 15 and 23 years. Many of these young athletes are drawn to boxing because it helps build confidence, discipline, and physical fitness, and offers an opportunity to compete at higher levels. However, despite their passion and dedication, most young boxers in Kathmandu lack access to proper training guidance that matches their individual needs. They often follow the same standard routines without considering their personal goals, strengths, weaknesses, and schedules. As a result, their progress is slow, they face higher risks of injury, and they may become demotivated over time. To address these issues, this proposal introduces a Training Recommendation System designed to provide each boxer with a personalized weekly training plan. This system will guide them toward more effective, efficient, and safer training, ultimately helping them reach their full potential and contribute to the growth of boxing in Nepal.

Problem Statement

In Kathmandu, most amateur boxing training programs are general in nature and do not account for the unique requirements of each athlete. Coaches often rely on traditional training methods that focus on group sessions and fixed routines. While this approach may work for some, it fails to address the different skill levels, physical conditions, and personal aspirations of individual boxers. Many young athletes might want to focus on improving speed, while others may aim to build endurance or strength. Furthermore, some may have more time to train than others, and these differences are rarely considered in current training plans. This lack of personalization can lead to slow development, frustration, and even physical injuries due to overtraining or incorrect techniques. There is a clear need for a system that offers customized training recommendations based on each athlete’s profile, which can support safer training, boost motivation, and enhance overall performance.

Objectives

The main objective of this project is to design and implement a Training Recommendation System that provides weekly personalized training plans for amateur boxers aged 15 to 23 in Kathmandu. The system will collect and analyze key information such as age, years of boxing experience, current fitness level, specific training goals (for example, improving agility, increasing punching power, or enhancing overall stamina), and the amount of time the athlete can dedicate to training each week. By using this information, the system will create detailed training schedules that include technical skill drills, strength and conditioning exercises, cardio sessions, and recommended recovery strategies. In addition to helping athletes improve their physical performance, the system also aims to reduce injury risks, improve mental focus, and keep them motivated through clear progress tracking. Another important objective is to support coaches by giving them structured, data-driven plans that can help them better guide and monitor their athletes, ultimately raising the standard of coaching in Kathmandu.

Scope

The initial scope of this system focuses on male amateur boxers aged 15 to 23 living and training in Kathmandu. These athletes represent a crucial age group where proper training can significantly shape their future potential in the sport. The system will be designed as a web-based or mobile application that allows athletes to enter their personal information easily and receive their weekly plans in a simple, user-friendly format. The training recommendations will cover various aspects of boxing preparation, including technique improvement, physical conditioning, endurance development, and injury prevention strategies. While the first phase of this project is limited to this specific demographic, the system has the potential to be expanded in the future to include different age groups, female athletes, or even athletes from other sports. By starting with this focused group, we can ensure the system is effective, practical, and well-received before expanding its reach.

Methodology

To develop this Training Recommendation System, the project will follow a step-by-step, research-driven approach. First, detailed data will be collected through surveys and interviews with young boxers and experienced coaches in Kathmandu to understand their current challenges, training goals, and daily routines. This information will help identify the key factors that influence effective training outcomes. Next, an algorithm will be designed that uses this data to match each athlete’s profile with a set of training modules. These modules will include different types of workouts, technical drills, and recovery techniques, all organized into weekly schedules tailored to the athlete’s needs. The system will be implemented as an interactive, user-friendly application, allowing athletes to input their details and instantly receive personalized plans. After the initial development, the system will be tested with a selected group of boxers to gather feedback on its usability and effectiveness. Based on this feedback, adjustments will be made to improve the system’s accuracy and user experience. Finally, the system will be refined and prepared for broader rollout to reach more athletes across Kathmandu.

Expected Outcomes

The proposed system is expected to bring significant benefits to young amateur boxers in Kathmandu. Athletes who use this system will receive training plans that are specifically designed for them, helping them train smarter rather than just harder. With a clear, customized roadmap, they will be able to focus on their weaknesses, build on their strengths, and progress more steadily toward their goals. This will likely lead to better performance in competitions, fewer injuries, and increased motivation to continue training. Coaches will also gain a valuable tool that assists them in tracking and guiding their athletes more effectively, allowing them to focus on quality rather than generic quantity. Additionally, this system may inspire more young people to take up boxing by making training more accessible, organized, and enjoyable. Over time, the project can contribute to raising the overall standard of amateur boxing in Kathmandu and possibly inspire similar approaches in other sports and regions.

Limitations

Although this system offers many advantages, it also comes with certain limitations. The accuracy and usefulness of the recommendations rely heavily on the quality and honesty of the information entered by athletes. If an athlete provides incorrect data, the plan may not be as effective or could even be counterproductive. Another limitation is that the initial version is focused solely on boys aged 15 to 23 in Kathmandu, which means it will not immediately benefit other groups such as female athletes or younger and older age categories. Furthermore, the system assumes that athletes have access to basic training facilities and equipment, which may not always be the case. In the future, these limitations can be addressed by integrating more advanced features, such as wearable device tracking, real-time performance monitoring, and expanding to include different types of athletes.

Conclusion

The Training Recommendation System for amateur boxers aged 15 to 23 in Kathmandu represents an important and innovative step toward personalizing sports training in Nepal. By focusing on each athlete’s unique needs and goals, this system empowers young boxers to improve more effectively and safely, while also helping coaches provide higher-quality guidance. Through this system, athletes can gain a sense of ownership and confidence in their training journey, leading to better results both inside and outside the ring. In the long term, this approach can strengthen the boxing community in Kathmandu, encourage more youths to take up the sport, and set a new standard for athlete preparation in Nepal. With continued development and future expansion, this system has the potential to bring lasting positive change to sports training across the country.