

UNIVERSITI TEKNOLOGI MARA

**EZBALLRETRIEVER: THE FAST &
SIMPLE TENNIS BALL
COLLECTOR**

**MUHAMAD IZHAN FAHMI BIN MOHD
AMIJAR**

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ABSTRACT

The sport of tennis is becoming increasingly popular, played by millions of people worldwide. However, players face challenges during training sessions, particularly when collecting tennis balls, which is time-consuming, energy-draining, and can lead to spinal strain. The objective of this project is to improve the efficiency and speed of the ball collection process while ensuring player comfort during training. The EZBallRetriever was designed to address these issues by incorporating a simple yet effective mechanism for collecting tennis balls quickly and efficiently. The device uses rollers, brushes, and a collection basket to gather the balls with minimal effort from the player. A battery-powered system ensures portability and ease of use, while the user-friendly design allows for simple operation. The outcome of this project is a functional and efficient tennis ball collector that reduces the time and energy spent by players during training sessions. The EZBallRetriever also helps prevent physical strain, making training more comfortable and productive. Additionally, the device's low-maintenance design ensures long-term reliability, with easily replaceable components to prolong its lifespan.

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1.5 Significance of Study

The significance of this study from this project are In the development of any product, it's crucial to assess the benefits it brings to both individuals and communities. The proposed tennis automatic ball collector offers unique advantages tailored to the needs of both. The significance of this product towards an individual is the tennis automatic ball collector addresses the needs of players across skill levels, particularly benefiting beginners and older individuals who may struggle with manual ball retrieval. By automating the collection process, it enables users to efficiently gather tennis balls in a shorter timeframe, enhancing practice efficiency and allowing players to focus more on skill development rather than manual labor.

Additionally, the collector reduces physical strain and fatigue associated with manual ball collection. By eliminating the need for repetitive bending and reaching motions, it minimizes the risk of muscle fatigue and discomfort, promoting prolonged and comfortable practice sessions.

For the significance towards the community, by streamlining the ball retrieval process across all skill levels, it levels the playing field and enhances overall efficiency during practice sessions. Amateurs, who may typically slow down the process of ball collection, can now contribute efficiently, thereby optimizing practice time for all players.

Furthermore, the collector contributes to energy conservation by reducing the physical exertion required for ball retrieval. By automating the task, it minimizes energy expenditure and promotes sustainable practice environments. The energy saved can be redirected towards enhancing practice quality and intensity, ultimately improving player performance and skill development.

In summary, the tennis automatic ball collector offers a range of benefits, from enhancing individual practice experiences to fostering a more inclusive and efficient tennis community. Its innovative design not only simplifies the ball retrieval process but also promotes physical well-being and environmental sustainability within the tennis ecosystem.