

A Trainer System for Olympic Air Rifle/Pistol Shooting Game

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Abstract- With immense competition in the current sports world, technology has come in to the picture in a substantial way to outperform other competitors in the sport. But, in Sri Lanka, most of the local sportsmen can not gain a proper training which is backed by technology to reach international levels. This paper mainly addresses this lack of technological aid that can be used to assist shooters and their trainers in Air Rifle/Pistol shooting to reach Olympic medals. In addition, we look into a trainer system solution, based on the requirements received from the shooters and trainers which consist of hardware and software components. Hardware components help to handle the physical activities of the sport and to derive inputs from the shooter. The software module which also includes a Decision Support System is used to do the analysis of the results where performance and psychological inputs from the hardware module are analyzed and the result is displayed. The inputs are derived through Infrared. Video processing techniques have been used to process the optimum positions of the movement of the hand. Further this system has been tested and found optimal accuracy. Our solution will become vital to train the shooters with the usage of latest technology in the lowest cost, so that our country can secure a gold medal in Air Rifle/Pistol shooting at Olympic Games