



All



ADVANCED SEARCH

Conferences > 2023 Intelligent Computing an... ?

# An Artificial Intelligence Improved Golf Self-Training System using Deep Learning

Publisher: IEEE

Cite This



D. Roopa ; R. Prabha ; S. Sridevi ; G.A. Senthil All Authors

1 Cites in Paper

76 Full Text Views



## Alerts

Manage Content Alerts Add to Citation Alerts

### Abstract



Download PDF

#### Document Sections

- I. Introduction
- II. Literature Survey
- III. Proposed Approach
- IV. Methodology
- V. Results and Analysis

Show Full Outline

- Authors
- Figures
- References
- Citations
- Keywords
- Metrics

More Like This

#### Abstract:

Golf is a sport that requires skill, precision, and mental fortitude. To finish a round of golf with the least number of strokes possible, it is optimal to strike the ball... [View more](#)

#### Metadata

#### Abstract:

Golf is a sport that requires skill, precision, and mental fortitude. To finish a round of golf with the least number of strokes possible, it is optimal to strike the ball consistently in the direction of the hole. However, without professional direction, reaching this goal is frequently difficult owing to the hurdles that golf brings. To address this, a deep learning model based on YoloV7 – a real-time object detection model and Open Pose was developed in this research to recognize the motions of prior data and deliver suggested feedback. This study aims to enhance golf training by analyzing swing mechanics, and player posture in real-time using the proposed technology. The analysis focuses on three key parameters: The golf club's swing action, the player's estimated pose, and ball movement detection. This study uses a hybrid technique to collect and analyze the data, which incorporates both qualitative and quantitative information. The objective of this project is to provide players with real-time feedback on their swing mechanics, body posture, and ball trajectory, enabling them to identify areas for improvement and adjust their technique. The study investigates the influence of training frequency. The findings of this study have the potential to have important consequences for sports skill development, notably in golf training, and may help to improve knowledge of the impact of environmental factors on player performance. In conclusion, this proposed system using deep learning utilizes technology to improve sports training and performance, with the potential to enhance player performance and contribute to advancements in sports training methods.



**Published in:** 2023 Intelligent Computing and Control for Engineering and Business Systems (ICCEBS)

**Date of Conference:** 14-15 December 2023

**DOI:** 10.1109/ICCEBS58601.2023.10448675

**Date Added to IEEE Xplore:** 19 March 2024

**Publisher:** IEEE

**► ISBN Information:**

**Conference Location:** Chennai, India

 **Contents**

**I. Introduction**

In general, sports are not a field where one may develop their skills without professional guidance. In several sports, the players have to rehearse their moves a lot by mirroring the more skilled players. They must be knowledgeable enough to correct their actions on their own for self-training, or they must hire a personal trainer. Not everyone has access to a personal trainer, and not everyone is an expert in the sport they want to play. In these circumstances, a successful self-training approach must be developed without jeopardizing the standard of teaching.

Authors



Figures



References



Citations



Keywords



Metrics



**More Like This**

Lightweight Whole-Body Human Pose Estimation With Two-Stage Refinement Training Strategy

IEEE Transactions on Human-Machine Systems

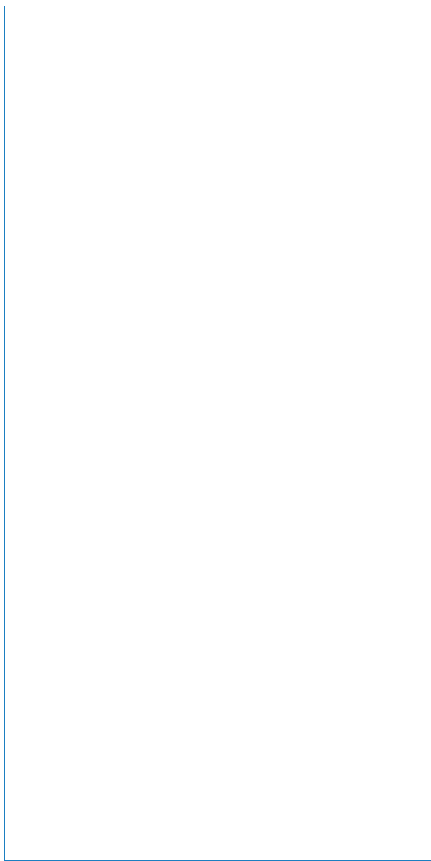
Published: 2024

Deep Learning Empowered Hand Gesture Recognition: using YOLO Techniques

2023 14th International Conference on Intelligent Systems: Theories and Applications (SITA)

Published: 2023

**Show More**



**IEEE Personal Account**

CHANGE  
USERNAME/PASSWORD

**Purchase Details**

PAYMENT OPTIONS  
VIEW PURCHASED  
DOCUMENTS

**Profile Information**


COMMUNICATIONS  
PREFERENCES  
PROFESSION AND  
EDUCATION  
TECHNICAL INTERESTS

**Need Help?**

US & CANADA: +1 800  
678 4333  
WORLDWIDE: +1 732  
981 0060  
CONTACT & SUPPORT

**Follow**



[About IEEE Xplore](#) | [Contact Us](#) | [Help](#) | [Accessibility](#) | [Terms of Use](#) | [Nondiscrimination Policy](#) | [IEEE Ethics Reporting](#)  | [Sitemap](#) | [IEEE Privacy Policy](#)

A not-for-profit organization, IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.

© Copyright 2024 IEEE - All rights reserved, including rights for text and data mining and training of artificial intelligence and similar technologies.

**IEEE Account**

- » Change Username/Password
- » Update Address

**Purchase Details**

- » Payment Options
- » Order History
- » View Purchased Documents

**Profile Information**

- » Communications Preferences

» Profession and Education

» Technical Interests

**Need Help?**

» **US & Canada:** +1 800 678 4333

» **Worldwide:** +1 732 981 0060

» Contact & Support

[About IEEE Xplore](#) | [Contact Us](#) | [Help](#) | [Accessibility](#) | [Terms of Use](#) | [Nondiscrimination Policy](#) | [Sitemap](#) | [Privacy & Opting Out of Cookies](#)

A not-for-profit organization, IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.

© Copyright 2024 IEEE - All rights reserved. Use of this web site signifies your agreement to the terms and conditions.