IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 3, Issue 1, February 2023

BICEP Curl Tracker Using Mediapipe

Ms. S. Harishma¹ and Dr. R. K. Kavitha²

Department of Computer Applications^{1,2}
Kumaraguru College of Technology, Coimbatore, India

Abstract: There isn't "real" live tracking in the fitness system that is currently in place. People who exercise at the gym manually track their progress, which may occasionally be rather tedious. Recent advances in artificial intelligence's image processing techniques are used in this research. Traditionally, humans are simply seen as a bounding box in object detection (a square). Through a process called stance identification and pose tracking, computers can learn to interpret human body language just like humans can. The conventional techniques for tracking poses, on the other hand, are neither rapid enough nor resistant enough to occlusions to be used in a practical setting. The development of high-performance, real-time pose identification and tracking will be a driving force behind some of the most significant advancements in computer vision. By monitoring a person's location in real-time, for instance, computers will have the ability to develop a knowledge of human behavior that is both more fine-grained and more logical.

Keywords: Object Detection, Computer Vision, Mediapipe, CNN

REFERENCES

- [1]. Deep Learning-based Human Pose Estimation using OpenCV By V Gupta.
- [2]. Jatin Goel, Harshita Jain, Prabhjot Kaur, "Bicep Curl Count: Computer Vision Based Counting", Ijraset Journal For Research in Applied Science and Engineering Technology, 2022.
- [3]. Robust articulated-icp for real-time hand tracking was done by A.Tagliasacchi, M.Schroder, A.Tkach, S.Bouaziz, M.Botsch, and M.Pauly in Computer Graphics Forum.
- [4]. DeepPose: Human Pose Estimation via Deep Neural Networks (August 2014) A.Toshev, C.Szegedy.
- [5]. Pose Trainer: Correcting Exercise Form using Pose Estimation performed by S.Chen, R.R. Yang Department of CS., Stanford University.
- [6]. Composite fields for human pose estimation by S Kreiss, L Bertoni, and AAlah in 2019. [7] Common objects in context by T Y Lin, M Maire, S Belongie, J Hays, P Perona, D Ramanan, P Dollar, and C Lawrence Â' Zitnick in 2014.
- [7]. Robust 3d hand pose estimation in single depth images: from single-view CNN to multi-view CNNs by L.Ge, H.Liang, J.Yuan, and D.Thalmann in 2016.

DOI: 10.48175/568