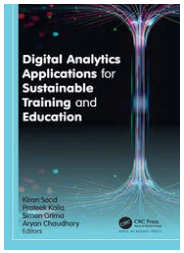

Chapter

Advancement in Physical Education Teaching and Assessment Based on Human-Computer Interaction with Deep Learning

By J. Antony Vijay (/search?contributorName=J. Antony Vijay&contributorRole=author&redirectFromPDP=true&context=ubx), B. Gomathi (/search?contributorName=B. Gomathi&contributorRole=author&redirectFromPDP=true&context=ubx)

Book Digital Analytics Applications for Sustainable Training and Education (https://www.taylorfrancis.com/books/edit/10.1201/9781032713366/digital-analytics-applications-sustainable-training-education-kiran-sood-prateek-kalia-simon-grima-aryan-chaudhary)

Edition	1st Edition
First Published	2024
Imprint	Apple Academic Press
Pages	22
eBook ISBN	9781032713366

You do not have access to this content currently. Please click 'Get Access' button to see if you or your institution have access to this content.

GET ACCESS (HTTPS://WWW.TAYLORFRANCIS.COM/LOGIN?CURRENT_URL=HTTPS%3A%2F%2FWWW.TAYLORFRANCIS.COM

To purchase a print version of this book for personal use or request an inspection copy (https://www.routledge.com/textbooks/evaluation/9781774915943)

GO TO ROUTLEDGE.COM (HTTPS://WWW.ROUTLEDGE.COM/DIGITAL-ANALYTICS-APPLICATIONS-FOR-SUSTAINABLE-TRAIN

Share

ABSTRACT

Physical education (PE) is an important topic in higher education that focuses on physical skills in health-promoting activities. Traditional PE in institutions faces challenges to stimulate graduates' interest in sports, resulting in reduced participation and inability to exercise the body. Innovative teaching methods and procedures are accompanied to make PE to the next level. In the previous work, improved energy efficient scalable routing algorithm (IEESRA) consumes less energy while routing the messages, it prolongs the overall network lifetime. Hence, it degrades the performance in assessing the accuracy of students' physical fitness qualities. In this chapter, we proposed a deep learning-based IoT system (DL-IoTS) to monitor every aspect of daily lifestyle. It predicts the students by forecasting the academic perseverance and improves the potential utility of sports applications that change the dimension of PE, including visualization and repetition by incorporated into PE teaching. In this research, the DL-based IoT system (DL-IoTS) promoted wearable technology in IoT-based human-computer interaction for PE. 378DL-IoTS recognizes all the physical activity data of the students. It collects those data using edge computing technology with an IoT platform and then processes it using the YOLOV5 Algorithm. Without the assistance of the Physical instructor, the students can train themselves using wearable technology. The analysis results show that IoT-based Human-Computer Interaction with YOLOV5 Algorithm improves the graduates' strength, speed, and qualities by 95% and provides a more important reference for enhancing PE success. The proposed framework of "DL-IoTS" is demonstrated its ability to independently collect and teach students.

< Previous Chapter (chapters/edit/10.1201/9781032713366-25/integrating-digital-citizenship-education-contemporary-educational-ecosystem-kamakshi-malik?context=ubx)
Next Chapter > (chapters/edit/10.1201/9781032713366-27/contribution-msme-sector-towards-social-responsibility-sustainability-study-sports-goods-industry-divya-mahajan?context=ubx)

(https://www.taylorfrancis.com)

Policies

Privacy Policy (https://informa.com/privacy-policy/)

Terms & Conditions (/terms-and-conditions/)

Cookie Policy (/cookie-policy/)

Journals

Taylor & Francis Online (https://www.tandfonline.com)

Corporate

Taylor & Francis Group (https://taylorandfrancis.com/)

Help & Contact

Students/Researchers (https://help.taylorfrancis.com/students_researchers)

Librarians/Institutions (https://help.taylorfrancis.com/librarians_institutions)

Connect with us

(https://www.linkedin.com/company/taylor-&-francis-group/) (https://twitter.com/tandfnewsroom?lang=en) (https://www.face

Registered in England & Wales No. 3099067
5 Howick Place | London | SW1P 1WG

© 2024 Informa UK Limited