Medical Xpress

AI helps football scouts unearth hidden talent through new innovative app

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Credit: Kingston University, London

With the summer transfer window about to slam shut, football clubs worldwide have been looking for an advantage when searching for the next football superstar. An innovative app, developed with input from Kingston University, is helping identify aspiring athletes with the assistance of artificial intelligence.

The aiScout app is the world's first fully-automated platform for the discovery and development of talent from across the globe. It was created by award-winning artificial intelligence company ai.io, who approached Kingston University's sport and exercise science team to validate the app.

Created to give players anywhere in the world the opportunity to be scouted and have a chance to impress clubs, the app allows users to upload ability-based videos in which they take part in trials and drills such as stepovers, press ups, jumps, and 10 meter sprints. The videos are then analyzed by AI technology and users are provided with scores and feedback. Professional clubs can then view the footage and trials scores and, if deemed good enough, invite the user to in-person trials..

Using the AI technology, the drills evaluate the users' reaction times, speed, balance, agility and fatigue levels. This data is then uploaded and stored in the app to be analyzed by professional football scouts.

Senior lecturer in sports biomechanics Dr. Simon Augustus was approached by ai.io to validate the data, ensuring the AI was accurately scoring the drills, which would then be accredited by football's governing body, FIFA.

"Two of our alumni work for ai.io, they reached out to us to carry out some testing. We used the hi-tech equipment in our labs, including force plates and timing gates, and also at our Tolworth Court sports ground. This allowed us to test all the drills, collect the data we needed and analyze it to test the accuracy of the AI model," he said.

The app is being used by Premier League side Chelsea and Championship side Burnley, as well as teams across the United States' Major League Soccer. This has already led to several amateur footballers being offered trials by professional clubs.

Users can use the feedback they receive so they can develop and improve their game. "It's very inclusive—users just need a football and a smartphone or tablet. There have already been success stories from countries across Africa and in Sri Lanka and India, countries where there are significant barriers to being scouted due to travel costs and logistics," Dr. Augustus said.

Dr. Augustus and the rest of Kingston's sport and exercise team were approached by Dr. Chris Howe, who completed his undergraduate, postgraduate and Ph.D. at Kingston University, and then worked as senior technician in the department of sport and exercise physiology. Dr. Howe is now Research and Innovation Lead at ai.io, and works alongside fellow Kingston graduate Richard Felton-Thomas, who is Director of Sports Science and Chief Operating Officer.

Dr. Howe explained ai.io's mission in designing the app aligned with Kingston University's values and skills-based outlook. Dr. Howe said, "We want to offer a level playing field for talent to be discovered regardless of who they are or where they are from. The sports and exercise science team have been great in utilizing their expertise to validate the data and validity of the technology so we can provide an efficient and useful tool to sportspeople worldwide—maybe we'll even

see a player discovered via the app playing in the Premier League in the not too distant future."

Dr. Augustus recently presented a paper, published in *International Society of Biomechanics in Sports*, on the subject at the society's annual conference in Salzburg.

More information: Augustus, S. et al. Agreement Between A Smartphone-Based Markerless Motion Capture Application (Aiscout) And Conventional Athletic Assessment, *International Society of Biomechanics in Sports Proceedings Archive* (2024). commons.nmu.edu/isbs/vol42/iss1/6

Provided by Kingston University, London

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