

Singapore develops motion capture technology to aid in physiotherapy and athletics

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The technology presents an improved tool to help in the care of Singapore's ageing population

Researchers at Nanyang Technological University, Singapore (NTU Singapore) have developed a motion capture technology called Precise Marker-less, which would aid doctors and physiotherapists in their consultations and diagnoses for patients in need of rehabilitation after an injury or recovering from an illness.

Through capturing and analysing the movements of over 150 subjects with machine learning, the technology has been shown to be more accurate than marker-less motion capture (mocap) systems available in the market, being able to provide 3D anatomical bone landmark locations with an accuracy of 10-15 millimetres, which is about the width of an adult's little finger.

Precise Marker-less has already received interest from The Posture Lab, a company that offers sports massage and physiotherapy and JM Vistec System, a Singaporebased imaging solutions firm. The research team is also in the process of filing for a patent with NTUitive, NTU's innovation and enterprise company.

Precise Marker-less was developed by a team of researchers, engineers, and data specialists at the Rehabilitation Research Institute of Singapore (RRIS). RRIS was founded in 2016 by NTU Singapore, the Agency for Science, Technology and Research (A*STAR) and the National Healthcare Group (NHG).