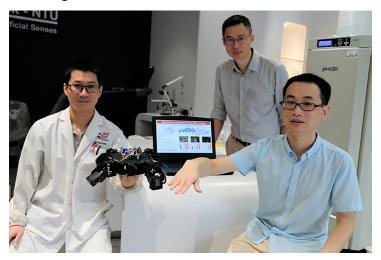


Singapore designs AI system to hand gesture recognition

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The NTU team has created a 'bioinspired' data fusion system that uses skin-like stretchable strain sensors made from single-walled carbon nanotubes



Scientists from Nanyang Technological University, Singapore (NTU Singapore) have developed an Artificial Intelligence (AI) system that recognises hand gestures by combining skin-like electronics with computer vision.

The recognition of human hand gestures by AI systems has been a valuable development over the last decade and has been adopted in high-precision surgical robots, health monitoring equipment and in gaming systems.

The NTU team has created a 'bioinspired' data fusion system that uses skin-like stretchable strain sensors made from singlewalled carbon nanotubes, and an AI approach that resembles the way that the skin senses and vision are handled together in the brain.

The NTU scientists developed their bio-inspired AI system by combining three neural network approaches in one system: they used a 'convolutional neural network', which is a machine learning method for early visual processing, a multilayer neural network for early somatosensory information processing, and a 'sparse neural network' to 'fuse' the visual and somatosensory information together.

The result is a system that can recognise human gestures more accurately and efficiently than existing methods.

The NTU research team is now looking to build a virtual reality (VR) and augmented reality (AR) system based on the AI system developed, for use in areas where high-precision recognition and control are desired, such as entertainment technologies and rehabilitation in the home.