

Amrita Vishwa Vidyapeetham develops device to turn eye signs into speech

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Netravaad is portable and lightweight device that can be adjusted to any position for the patient's comfort

Researchers at Humanitarian Technology (HuT) Labs of Amrita Vishwa Vidyapeetham, headquartered in Coimbatore, have developed India's first device that enables people with speech impairment to communicate with the world by using simple eye signs.

The device, called Netravaad, consists of a camera, display, speaker, controller and a rechargeable battery that lasts for six hours on a single charge.

The camera detects the eye sign of the user, which is converted into alphabet, word or a sentence by a customised artificial intelligence (AI) algorithm called Sharani. The detected word and sentences are displayed on the screen.

In addition, the voice through speakers helps the external world understand the patient's feelings, and the patient also gets a feel of speaking to others. Netravaad will advance in its development and become available in regional languages such as Malayalam and Hindi. Also, the user interface will be highly interactive, ensuring a comfortable experience for users.

Netravaad is portable and lightweight device that can be adjusted to any position for the patient's comfort. It can be used while sitting in a chair, lying on the bed or even while travelling. The Netravaad Unit houses a display monitor, camera, speaker, a smash box and a rechargeable 24V battery. The complete unit is housed in a box and positioned on a swivel platform that can be adjusted to face in any direction as needed. The camera detects the user's eye movements and converts them into words or sentences, which are displayed on the screen and verbalised through the speaker.