

AI technology can enhance laborers 'safety'

Han Hyung-seob, CEO of local startup Health and Happiness System(HHS), has sought to develop safe systems to reduce work-related disasters in Korea which has the third worst industrial safety record among member countries of the Organization of Economic Cooperation and Development(OECD).

Has established HHS in the southern port city of Ulsan in 2016 and succeeded to develop a smart safety helmet which utilizes artificial Intelligence enhanced electroencephalogram(EEG) technology to monitor the brain waves of wearers and notifies the on-site manager of laborer's health status.

"This is the industry's first attempt to combine information technology with EEG to monitor brain wave of people," Han told the Korea Times. "Using sensors, AI technology can monitor not only brain waves but also vital signs such as the ECG or pulses of our smart safety helmet wearers. This enables on-site managers to check the health status of their laborers in real time.

Stating that the firm's safety helmet will be mostly used on construction sites, Han said the smart safety helmet benefits both workers and companies.

"By using the smart safety helmets, companies will be able to reduce industrial disasters. With better risk management systems, they will eventually increase productivity on industrial sites. Also, for workers, they can reduce the chances of having industrial disasters and maintain well-balanced working conditions," he said.

Han said he dreamed of developing such devices when he was a doctoral student in computer science.

"When I was a doctoral student in computer science at the University of Ulsan, I studied biomedical signal processing, which is about analysis of measurements to provide useful information upon which people can make decisions," he said.

The presidential office invited Han in September 2019 to Cheong Wa Dae to mark the country's one-millionth design patent being issued by the Korean Intellectual Property Office.

Han said the company's safety helmet will be sold to the country's state-run companies so that the helmet can be distributed to industrial sites.

"We signed a contract for the state-run corporations. We are also in the negotiation phase with the country's major construction firms as they are deeply interested in changing the safety of their workers on construction site," he said.

Supported by Ulsan Economic Promotion Agency, Han's company had a chance to promote its smart safety helmet at this year's Consumer Electronics show held in Las Vegas from Jan. 7 to 10.

At the Eureka Park exhibition hall where startups from many countries were gathered HHS showed off its smart helmet. "We have received a lot of positive responses. Thanks to the agency, we had a chance to meet with international buyers," he said.