Gait analysis of parkinson's disease patients

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ABSTRACT

With the increase of the population of the elderly people, Parkinson's disease (PD) gets more and more ordinary in our society. PD is known as the second common neurological disorder and highly impacts on both economic and social aspects, due to its high cost of the care for the patients. According to our text mining-based research analysing papers concerning PD published in the recent years (2014-2017) for the purpose of identification of recent interesting topics in it, the term 'gait' has gained the highest attention. Gait analysis, in fact, plays a crucial role to make a prediction of PD, its early detection, its diagnosis and even prevention of the risk of fall. In this presentation, author will introduce typical sensors to observe PD patients' gaits like 3D motion captures, accelerator and gyro sensors, voice recording devices, and so on. He will also present artificial intelligence (AI) techniques utilized to recognize PD gait patterns such as freezing of gait, shuffling of gait and the like. He will finally explain how these techniques of wearable devices and sensors, and machine learning approaches in AI can help both doctors and patients in terms of the act of diagnosing and caring for PD, and taking medication.

Biography

Hee-Cheol Kim has completed his PhD in 2002 from Stockholm University, Sweden. He is currently the Dean of Institute of Anti-aging Healthcare (IDA), Inje University, South Korea. He has over 100 publications that have been cited over 700 times in the fields of human computer interaction, intelligent healthcare and software engineering, and his publication H-index is 15 and has been serving as an Editor of Chief of *Journal of the Korea Institute of Information and Communication Engineering (J. Korea Inst. Inf. Commun. Eng., JKIICE).*

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