

SenSIP Seminar Series

Early diagnosis of neurodegenerative disorders by detecting irregularities in speech

Presenter: Abhinav Dixit

PhD Student in ECEE

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Abstract

Evaluation of neurodegenerative disorders such as Parkinson's disease is mostly limited to perceptual tests upon rather small samples in controlled laboratory environments. In this talk, we will introduce an automated method for observing changes in speech utterance and articulation prior to the clinical diagnosis. Using speaker identification, we extract speech samples from candidates that have been diagnosed with Parkinson's disease. We then look for longitudinal degradation in speech parameters that have been proven to change in the progression of Parkinson's. This study aims to develop an automated tool to monitor the irregularities in speech, prior to the evident physical symptoms of Parkinson's.

Biography:



Abhinav Dixit received the B.E. degree in electrical engineering from the Rajiv Gandhi Technological University, Bhopal, M.P., India, in 2013. He is currently a Ph.D. student in school of electrical, computer and energy engineering at Arizona State University, Tempe, AZ, USA. His research interests span a range of topics in speech processing, machine learning and acoustic changes in neurodegenerative disorders. His current research is primarily focused on the study and development of automated methods for tracking changes in speech of Michael J. Fox before he was diagnosed with Parkinson's disease.

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