

## **NOTEWORTHY: A WEARABLE DEVICE APPROACH TO PERFECTING HUMAN'S AUDITORY MEMORY**

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Our auditory memory (remembering what we hear) is highly unreliable in both the short-term and long-term, yet a significant amount of our daily informational inputs is presented to us verbally through conversations.

Current solutions require users' explicit awareness, consisting of archaic pen-to-paper note-taking and audio recording on mobile phones; both of which intrudes the quality of the conversation. Noteworthy's objective is to provide an automated solution for perfectly remembering conversations specific to individual user's preference on what should be remembered, and storing these conversations in an easily recallable format. Noteworthy accomplishes these goals by creating a wearable device that utilizes a pulse sensor and Bluetooth low energy technology to send Inter-beat interval to a companion mobile application. The mobile application analyzes the inter-beat interval to compute the running Heart Rate Variability (HRV) of the user and auto-detect stress based on a change detection in the user's HRV trend. Upon stress detection, the mobile application triggers an audio recording and subsequent speech-to-text translation which are both stored in a user-friendly interface. The outcome of this project is a wearable device and mobile application that work in tandem to provide end users with perfect auditory memory.