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AI based system to help people suffering from hearing impairment and suppressing background noise



In crowded places, many people face the cocktail party problem meaning that they can't hear or understand multiple people at the same time. This is a greater struggle for hearing impaired people because most hearing aids amplify all sounds around the users (even the noise). The idea is an AI based system to provide a directional hearing ability. It dampens noise, and the user chooses which sounds to be amplified and broadcasted to the hearing aid. So, they can choose what they want to hear and when.

A prototype of the app is shown in Figure 1 which displays the sound sources around the user. Different types of sound sources are classified and the user can select a source to amplify or dampen it and the sound will be broadcasted to the hearing aid through Bluetooth. This prototype was designed as part of Student Innovation Lab at KIT. You can watch the pitch video of the previous team at www.convoaid.com/idea.



Figure 1: Prototype of the app displaying the sound sources.

We are looking for a technical co-founder to join us at this amazing project. The algorithms on the app need to be designed and developed based on AI. Hence, we are looking for someone with C/C++ programming skills, AI background and signal processing. If you are interested in the project and want to know more, please contact us through the provided email.

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