

USRI 2021 – Hearing Test Device Research and Development

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PROBLEM

People with auditory disabilities face problems when pursuing things like education, employment, and social interaction. Currently over 5% of the world's population will require some sort of assistance to help with their hearing loss. People in poverty-stricken countries and communities have less resources and money to properly diagnose auditory disabilities.

THE SOLUTION

To help bridge the gap to receiving proper assistance with hearing tests the device that was worked on this summer aimed to create a cost-effective alternative to expensive hearing test equipment. The device can test both ears individually at various frequencies to help diagnose specific disabilities.

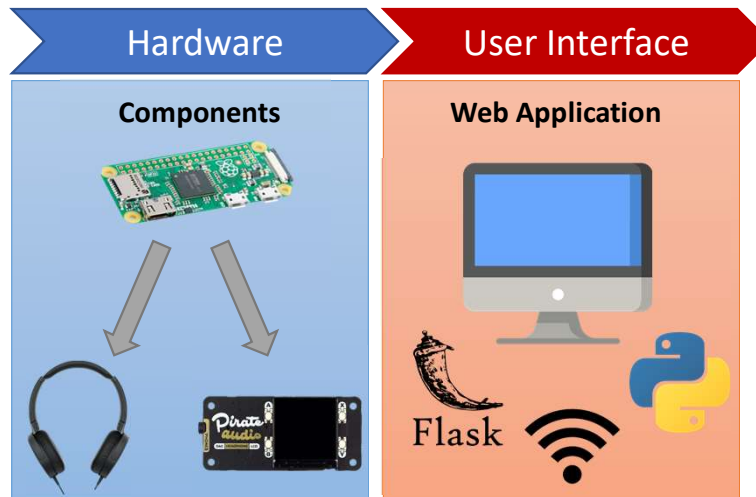
ALTERNATIVES

Currently other hearing devices are offered and available.



The issue associated with these devices is that they are generally more expensive and larger than the device designed this summer.

SYSTEM OVERVIEW



FEASIBILITY

To adhere to one of the main goals the hardware used to create the hearing testing device amounts to approximately \$50 before wholesale.



Given low hardware costs the device can make an impact in third world countries that lack health care infrastructure.

APPLICATION

The device offers accessibility and availability. The components that are used to create the device are readily available to purchase making it unlikely for a shortage. The device also provides a comprehensive user interface for the person tracking the results to clearly choose frequencies and track when the person being tested can hear the frequencies.

FUTURE

To further advance the impact the device can have:

Wholesale

The hardware associated with the device will be sourced with wholesaling to improve cost reduction



User Interface

In addition, the user interface will be built up to include patient profiles to track past results and assess any progress

