TECH OFFER

AI Audiologist Device for Hearing Screening

KEY INFORMATION

TECHNOLOGY CATEGORY:
Sustainability - Sustainable Living
Healthcare - Telehealth, Medical Software & Imaging
Healthcare - Diagnostics
Infocomm - Healthcare ICT

TECHNOLOGY READINESS LEVEL (TRL): TRL6
COUNTRY: THAILAND
ID NUMBER: TO175221

OVERVIEW

Hearing loss detection traditionally requires professional oversight in specialized environments, making early detection and routine screening difficult for individuals without access to these resources. This new automated hearing loss detection solution addresses that challenge by offering a comprehensive, self-administered system that combines headphones and a screen monitor to facilitate quick and accurate hearing assessments without the need for a healthcare professional.

The solution works by guiding users through a series of hearing tests displayed on the monitor. Users respond to auditory cues through the headphones, and the system analyzes their responses in real time. Using AI algorithms, the device can monitor hearing performance and generate a detailed report on the user's hearing abilities. The results are then presented in a report, offering clear insights into any detected hearing loss and recommendations for further action, if necessary.

This system offers a non-invasive, easy-to-use, and accessible method for early detection of hearing loss, enabling individuals to assess their hearing health without requiring professional assistance or specialized equipment. It is ideal for home use, healthcare facilities, and community outreach programs, significantly improving access to essential hearing assessments and promoting proactive management of hearing health.

The technology owner is looking for collaboration with companies/ research institutes in audio technology and/or partners keen to adopt the technology.

TECHNOLOGY FEATURES & SPECIFICATIONS

Automated Hearing Detection: The system includes headphones and a screen monitor that administer a series of auditory tests. It automatically monitors and analyzes user responses in real time, making it an easy-to-use solution without needing a professional.

Self-Administered Hearing Tests: The device guides users through various sound frequencies and intensities to measure hearing thresholds. Users respond to auditory cues displayed on the screen, allowing for personalized, accurate results based on individual responses.

Real-Time Analysis: Built-in algorithms provide immediate feedback on hearing health, analyzing the user's responses to generate detailed hearing reports. The system highlights any areas of concern and offers recommendations for further testing or treatment.

Portable and User-Friendly: The system is designed for home use with a simple setup, making it accessible to a wide range of users. Its portable design means it can be used anywhere, ensuring hearing health can be monitored frequently and conveniently.

POTENTIAL APPLICATIONS

Home Use: This solution empowers individuals to monitor their hearing health from the comfort of their homes, eliminating the need for professional intervention for routine checks. It's particularly useful for elderly users or individuals who may not have regular access to audiologists.

Telemedicine: In telehealth settings, the device can be used for remote hearing assessments, allowing healthcare professionals to review hearing data from patients without requiring an in-person visit. This is especially beneficial in rural or underserved areas where access to audiologists may be limited.

Healthcare and Wellness Centers: Clinics and wellness centers can use the device for preliminary hearing screenings, allowing for faster assessments and reducing the need for full audiometric evaluations unless necessary.

Occupational Health: Employers in industries with high noise exposure can use the system to conduct regular hearing tests for employees, ensuring compliance with hearing protection regulations and enabling early detection of work-related hearing loss.

These applications demonstrate the versatility and accessibility of this automated hearing loss detection system, making it suitable for a range of environments where early and regular hearing assessments are needed.

UNIQUE VALUE PROPOSITION

Accessibility: This solution democratizes hearing loss detection, making it available to anyone, regardless of access to a healthcare professional or specialized clinic. Users can easily monitor their hearing health at home.

Automated: The system offers fully automated analysis, eliminating the need for a trained audiologist. Users receive report with insights into their hearing condition and personnalised recommendations.

Low Cost: By reducing the reliance on professional services for initial hearing screening, this solution offers a cost-effective alternative to traditional hearing assessments. Each test cost **less than** USD 0.50.

Proactive Hearing Care: The device empowers users to regularly monitor their hearing health, leading to earlier detection of hearing loss and faster intervention, promoting better long-term outcomes.

This combination of accessibility, convenience, and automation makes the solution ideal for home use and helps individuals take control of their hearing health without needing frequent professional evaluations.