ZBeats won the US National Science Foundation (NSF) SBIR Award

Award Abstract # 2025951

SBIR Phase I: A Cloud-based, AI-enabled ECG Analysis Platform for More Efficient Arrhythmia Detection

The broader impact /commercial potential of this Small Business Innovation Research (SBIR) Phase I project is help cardiologists with new tools for electrocardiogram (ECG) monitoring, classifying heartbeats and detecting irregular rhythms. This project will develop a system that uses machine learning to monitor heart condition and enable advanced, accurate detection of potential problems, saving lives and reducing health care costs. It will leverage novel algorithms and effective interactive tools to improve care. This Small Business Innovation Research (SBIR) Phase I project will develop machine learning algorithms and annotation tools to automate ECG analysis. Two machine learning (ML) algorithms will be developed. The first ML method will consist of two stages: 1) process single cardiac beat classification; and 2) cluster them into ECG waveform templates to detect and classify arrhythmia. Three tools will be developed for further disambiguation. Technical tasks include: (a) test the accuracy of the ML algorithms per ANSI/AAMI EC57:2012; (b) evaluate the effectiveness of interactive tools with clinical advisors and potential users.This award reflects NSF's statutory mission and has been deemed worthy of support through evaluation using the Foundation's intellectual merit and broader impacts review criteria.

NSF Award Search: Award # 2025951 - SBIR Phase I: A Cloud-based, AI-enabled ECG Analysis Platform for More Efficient Arrhythmia Detection