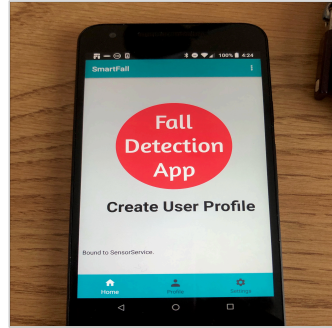


NSF-SCH FUNDED PROJECT 2021-2025

Personalized Watch- based Fall Risk Analysis and Detection Using Multi-Modal Learning



- Very frequently, people fall and can't get up or seek help
 - CDC reports 1 of 4 Results in approx. 36 million falls [2]
- Most existing watch-based fall detection system is underperforming when it comes to detecting falls (i.e too many false positives)
- The goal of this project is to combine real-world limb-core dynamics of an individual with data collected by accelerometer via a commodity wristwatch and a cell phone on the opposite hip to improve the detection of hard and soft falls.
- A personalized fall risk analysis and detection model will be created for each user via real-time learning of the person limb-core dynamics using multi-task and multi-modal deep learning approach
- **Project funded by NSF SCH Program for a total of \$1,103,754 for four years. It is a collaborative project between Texas State, UT Dell Medical School and Illinois Institute of Technology.**
- **I am looking for students to work as research assistants on this project. Email angu@txstate.edu to enquire**