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UNITE
Smart, Connected, and Coordinated Maternal Care for Underserved Communities

OBJECTIVE
To build an app to ubiquitously monitor health parameters of underserved expecting pregnant mothers to prevent preterm births.

BACKGROUND
• We are collaborating with the University of Turku in Finland, where they are currently running clinical trials using the wearable devices to continuously track health parameters of 15 pregnant women. As of now, two of the mothers have given birth, and they are monitoring the mothers 1-3 months postpartum.
• We are working to help prevent preterm births, which is the most common cause of neonatal deaths.
• Underserved communities with low socioeconomic status may not receive satisfactory maternal care or delayed and infrequent care, resulting in poor birth outcomes and a decline in overall health.
• This project will bring together a diverse case of community members, including mothers, families, care providers, and outreach resources.
• We are working with the School of Nursing at UCI, OC MOMS, and University of Turku.
• The UCI Sue and Bill Gross Nursing School gave the watches to the caretakers of the moms to test possibly feasibility in the OC region.

PROJECT OVERVIEW
The UNITE project is a community engagement model for maternal care that is smart, connected, and coordinated.

The model is designed to be scalable, portable across diverse communities, and brings together a multi-disciplinary partnership of researchers together with non-profit agencies.

• The project has multiple interfaces: a admin dashboard, a phone, and wearable devices, with the Oura Ring and the Samsung Gear Sport Watch.
• The Samsung Gear Sport Watch was utilized for this project considering several factors such as the built-in sensors, flexible strap, long battery life, and waterproofness.

FINDINGS
Since I worked on the watch app, I used the Tizen Studio IDE to continue working on developing the app. Installing the packages and the external software to run the app on my watch was my first hurdle. I created a list of instructions to help facilitate the process for future workers on the project.

There are currently no headers for the Monitor and Detector files, so I wrote some C code to print to log the contents of different functions what are available in Tizen Studio.

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