The Department of Computer Science and Engineering

University of Nevada, Reno

cordially invites you to a Master's colloquium

HeartMate: A Competitive and Motivational Fitness Application for iOS Devices

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science
in Computer Science and Engineering.

by

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Abstract:

Smartphones today are more advanced than they have ever been before with hardware sensors built into them to detect location, motion, as well ways to communicate with third party hardware through bluetooth, and the internet through cellular or wifi. With the introduction of Apple's App Store, and the Google Play store smartphone devices have been given features one would not think possible on a cell phone. One of the target categories for app developers is health, due to the sensors provided in current smartphones an application can be developed to track a users health. The apps currently on the market motivate users through mostly goal based challenges between themselves or their friends. HeartMate is an iOS mobile application that utilizes the sensors in the iPhone, and the use of a Bluetooth LE connected heart rate monitor to create a new competitive, motivational, real time social experience using heart rates as a performance measure. HeartMate calculates and keeps track of target workout zones that are specific to the fitness level. HeartMate has a social component and can be used to challenge friends to a run by streaming their heart rate data in real time. HeartMate also features the ability to challenge past running workouts of friends or oneself. HeartMate fills the hole missing from motivational / competitive fitness applications on smartphones.

9:45 am, Wednesday, May 11, 2016

Scrugham Engineering and Mines (SEM) room 201

Committee: Dr. Fred Harris, Dr.Sergiu Dascalu,and Dr. Yantao Shen