PROJECT TITLE: SMART-WATCH ANALYTICS

Project Supervisor:
Dr Shirley Atkinson, University of Exeter, Centre for Simulation, Analytics and Modelling, Exeter Business School.

Project Enquiries:
s.atkinson3@exeter.ac.uk

Project keywords:
Environment and health, smartwatch, wearables, monitoring environment,

Proposed start date:
19th June – 10th July

Project description

The emergence of ubiquitous and wearable technologies alongside “Smart Homes” brings the Internet Of Things (IoT) technology into everyday life with the promise of enhancing the quality of life. Collecting e-health data via these wearables and via the home would appear to make life easier to lead a healthy life. However, further investigation needs to be carried out to examine the limitations of the data when considered in conjunction with the environment.

The purpose of this small project will be to examine smart-watch data and compare with open datasets to begin to explore the role of wearables in contributing to an understanding of how the environmental considerations impact the individual.

The main project objective will be to carry out experiments to evaluate data collected from different sources such as selected wearables (smart-watch) and open datasets. The data will be visualised and evaluated to identify and determine limitations in regard to data usability when aligned with the collection of environment data.

Candidate requirements

This project will require a candidate that has analytics experience (statistics AND python) and so will suit a data science, analytics, computer science or mathematical candidate.

The expected timeline will be as follows:

1. Wk1 : Literature search and review. The first phase of this work will be to carry out a systematic literature review to examine the current thinking for collection of data from wearables and smart home devices.
2. Wk2-3 : Design and development of an experiment to apply to wearable device data collection.
3. Wk4 : Conducting of experiments to collect wearable device data.
4. Wk5 : Exploration and examination of current open data sets from wearables and smart home data.
5. Wk6 – 7 : Evaluation of collected data and exploratory visualisation.
6. Wk8 : Write up and design of poster.