

# ACIT3855 – Project Week 1

## Purpose of the Software

The purpose of this software is to supplement the Wattch Fitness application to analyze heart rate (HR) while users are using/riding the application. Wattch Fitness syncs workouts to movies, hence analyzing heart rate is quite interesting and taps into the world of neurocinematics.

This connected fitness application sends ride data in the form of a fit file to an Azure blob storage after a ride is finished. The goal of this API is to receive heart rate data from a HR monitor to further analyze the effect of the application to users.

## Events Received

The events the API will receive are as follows:

1. A user finishes a ride, which is when the **fit file** will be sent to the blob storage.
2. Heart rate readings throughout their ride in the form of a **heart rate variability data file (HRV)**.

## Peak Concurrent Events

The events can happen throughout the day as users will ride whenever they would like. However, peak riding times are after work (5:00pm – 9:00pm) where the application can receive an estimated 50 fit files per minute. This corresponds to the heart rate reading data file during their ride, the heart rate monitor will expect to have a peak load of 1000 readings per second.

## Users

People using the application will be:

- **Wattch Fitness team members** who will view trends of ride statistics, movie watch times, and HR.
- **Application users** who would like to analyze their ride and HR data for training purposes.