**README – DATA COLLECTION**

s – seconds

Foot with sensor = Left

One leg, toe, and heel trials – Left foot

Each protocol represents a complete trial

**STANDING**

**Subject 1-4:** (Each trial was recorded independently for 15s)

**File Name: AGDSubjectNumber\_Trial\_SpecificTrial**

AGDSubjectnumber\_stand\_twolegs: Participant standing bilaterally on a force plate

AGDSubjectnumber\_stand\_oneleg: Participant standing on one leg

AGDSubjectnumber\_stand\_toe: Participant standing on the toe

AGDSubjectnumber\_stand\_heel: Participant standing on the heel

**Subject 5+:** Each activity (two legs, one leg, toe, heel) is recorded for 10s

**Protocol:** two legs – one leg – two legs – toe – two legs – heel – two legs

Force plate records 10 s before the sensor and stops recording 10s after the sensor

**Repeated 2x**

**WALKING**

Subject 5+:

Stop = 5s

Stair count: 11 and 13 Average Width(cm): 26.26 and 27.05

Average Height(cm): 16.11 and 17

**Protocol:** (From lab) Walk – stop – 13 up – stop - walk(transition) – stop – 11 up – stop - walk (turn) – stop – 11 down – stop - walk(transition) – stop - 13 down – stop - Walk (Return to lab)

**Repeated 2x**

**STAIRS**

Subject 14+:

Same protocol for all trials

Stop = 5s

11 and 13 – Stair count

**Protocol: Start (with a 5s stop) – 13 up** – stop – walk(transition) – stop - **11 up** – stop - turn and stop – **11 down** – stop – walk(transition) – stop – **13 down** – stop – turn and **stop** (first cycle ends, the second cycle **begins with a 5s stop)**

**Repeated 3x**

Steps taken by the left leg =

Total number of steps taken by left leg (stair number:13) = 7

Total number of steps taken by left leg (stair number:11) = 6

**DATA STORAGE**

**GOOGLE DRIVE (**[**link**](https://drive.google.com/drive/folders/11CG0YyCnuuAkdDY1a5ttvsLSef_jaSEl?usp=drive_link)**)**

Main Folder – **WEARABLE TECH**

Subfolders : **DATA COLLECTION and DATA PROCESSING**

**DATA COLLECTION**

Subfolders – **AGD\_ DATA** (Automatic/AI Gait Detection) and **TEST\_TRIALS**.

**AGD\_ DATA**: Contains all the “ForcePlate”, “Sensor”, “Subject Demographics”, and “Step Count” data for every subject.

**FileName: AGDSubjectNumber\_Trial\_TrialNumber**

ForcePlate folder: Contains standing trial data recorded from the force plate for every subject in three formats. (.xlsx, .mat, .csv)

Sensor folder: Each subject folder (AGDSubjectNumber) contains the walking, standing, and stair trials (.csv).

Step Count sheet: Contains average height and width of stairs.

Contains step counts for both legs during walking trials for subject 14+

NB: Step count was recorded using [pacer walking app](https://www.mypacer.com/)

**TEST\_TRIALS** – Contains dummy data for different standing and walking trials recorded for both the sensor and the force plate.

**NOTES**

Subject 13: Data excluded (technical issue – wire broken)

(Data retaken and replaced)

Subject (13,17,18): BMI > 30

Subject 18: AGD 18(2) - Contains data from subject 18 when testing different standing protocols and testing different Data Acquisition systems.

**DATA PROCESSING:** Notes on approaches used to process data.

Subfolder: Standing Trials