WISDM Smartphone and Smartwatch Activity and Biometrics Dataset Data Set

Download: Data Folder, Data Set Description

Abstract: Contains accelerometer and gyroscope time-series sensor data collected from a smartphone and smartwatch as 51 test subjects perform 18 activities for 3 minutes each.

Data Set Characteristics:	Multivariate, Time-Series	**Number of Instances:**	15630426	**Area:**	Computer
Attribute Characteristics:	Real	**Number of Attributes:**	6	**Date Donated**	2019-10-06
Associated Tasks:	Classification	**Missing Values?**	N/A	**Number of Web Hits:**	47443

Source:

Dr. Gary Weiss, gaweiss '@' fordham.edu, Computer and Information Sciences Department, Fordham University.

Data Set Information:

For a detailed description of the dataset, please see the following pdf file that is stored with the data: WISDM-dataset-description.pdf. The raw accelerometer and gyroscope sensor data is collected from the smartphone and smartwatch at a rate of 20Hz. It is collected from 51 test subjects as they perform 18 activities for 3 minutes apiece. The sensor data for each device (phone, watch) and type of sensor (accelerometer, gyroscope) is stored in a different directory (so there are 4 data directories). In each directory there are 51 files corresponding to the 51 test subjects. The format of every entry is the same: . The descriptions of these attributes are provided with the attribute information. In addition to the raw time-series sensor data we also generate examples that describe the sensor data using a 10-second window. See the dataset description document for details. Although this data can most naturally be used for activity recognition, it can also be used to build behavioral biometric models since each sensor reading is associated with a specific subject.

Attribute Information:

subject-id: value from 1600- 1650 that identifies one of the 51 test subjects
activity-code: character between 'A' and 'S' (no 'N') that identifies the activity. The mapping from code to activity is provided in the activity_key.txt file and in our dataset description document.
timestamp: Unix time (integer)
x: represents the sensor reading (accelerometer or gyroscope) for the x dimension
y: represents the sensor reading (accelerometer or gyroscope) for the y dimension
z: represents the sensor reading (accelerometer or gyroscope) for the z dimension

Relevant Papers:

Gary M. Weiss, Kenichi Yoneda, and Thaier Hayajneh. Smartphone and Smartwatch-Based Biometrics Using Activities of Daily Living. IEEE Access, 7:133190-133202, Sept. 2019.

Citation Request:

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