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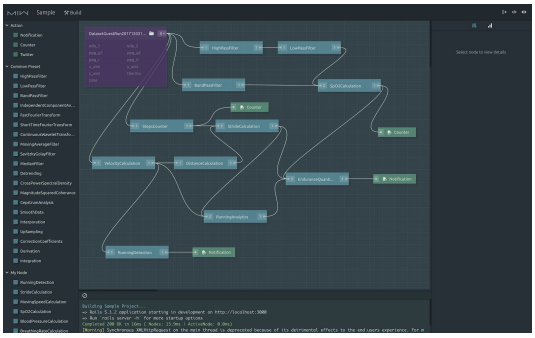
Arblet Inc. unveils the Cloud Biometric Analytic Tool and Wearable Device at CES2018

First target users are biomedical researchers and data scientists

Las Vegas, NV, USA (Sunday, January 7, 2018) -- Arblet Inc., a Tokyo based start-up unveiled its prototype of the Cloud Biometric Analytic Tool (patent granted in Japan). The primarily target users are researchers in biomedical academia and enterprises who have interests or do business in wellness, human behaviors or physical performances, as well as data scientists who simply love data analysis. The biometric data for analysis is collected from the Wearable Device also in development by Arblet.

Cloud Biometric Analytic Tool (prototype)



Wearable Device (prototype)

The Wearable Device is equipped with 3 types of sensors which are an accelerometer, optical sensors, a thermistor along with electrodes, to collect the biometric data. Such data collected are raw digital signals (hereinafter “raw data”), are calculated into 4 basic information to know a person’s state, that are pulse waves, electrodermal activity, skin temperature and movement. These raw data are sent to the cloud via a smartphone app for composite analysis and for creation of algorithms to calculate various changes inside of the body. The analysis result may be (but not limited to) the following examples (in no particular order):

1. **Data confirmed in our lab**: systolic and diastolic blood pressure (patent granted in Japan), skin temperature, heart rate, ECG

2. **Data to be confirmed as we further progress in our development**: breathing rate, SPO2, blood glucose level, autonomic balance, lactic acid estimation etc.

3. **Possible detection and forecast based on analysis**: stress level, sleepiness, emotions, dehydration, defecation, menstrual cycle, food intake, poor circulation, changes in immunity, calorie intake and consumption, apnea and hyperpnea, walking style, stumbling, etc

Conventional wearable devices come with apps pre-designed by their manufacturers to notify information such as heart rate and the count of footsteps. In some cases, the manufacturers allow authorized developers to access certain data via API but such data are mostly “processed data” omitting details. To give you an example, heart rate is a processed data out of pulsewave which is a raw data. Heart rate utilizes a part of pulsewave data, so the rest of the data may be discarded by the manufacturers before developers access to.

With Arblet's analytic tool and device solution, researchers and analysts can access "raw data" (in other words "not processed data"). It allows them to freely set hypothesis and run analysis on human's behaviour, wellness status, physical performances and provide feedbacks at their discretion.

We believe that the following points are attractive to the researchers and analysts;

1. **Dataset conditions are consistent**: Because Arblet holistically collects basic vital signs from a unified device, it gives efficiency to researchers to start the analysis. If the biometric datasets are collected from various devices, they will have to consider the differences in specifications and measurement accuracy among hardware and synchronize in time, which add a few more processes before they can start the analysis.

2. **Access to raw data**: Raw data is the king. As long as the researchers have access to the raw data, they are always able to do analysis with new methods. For example, number of footsteps are calculated from the accelerometer input. If in the future they want to analyze walking style, they cannot do so out of footsteps data because it is a processed data that discard accelerometer details other than the number of footsteps. However, if they have access to the accelerometer raw data they have the liberty to analyze beyond number of footsteps.

3. **Access to other users' data**: The more data you can analyze, the better result you may achieve. The raw data on Arblet's analytic tool are to be shared among users in anonymized and de-personalized way. Use of each other's data not only helps you achieve more accuracy in your machine learning but you will be also helping other researchers' projects too.

4. **Verification of hypothesis can be done efficiently**: Researchers can easily push notifications to the smartphone app to verify the algorithms in real use cases. For instance, if they made analysis to "detect stumbling during walking". The user will get a notification on the smartphone app when the stumbling happens. The user has the choice to respond with true/false or comment to feedback to the researcher.

Arblet endeavors to develop and deliver the cloud biometric analytic tool and the wearable device to excite researchers and analysts and for us altogether to discover the mysteries in human behaviors and physical performances to bring the society to the next level of wellness.

We will be showcasing our prototypes at CES2018, at the Sands Hall A-D, Level 2, #43307 (next to Cerevo Inc.)

About Arblet Inc.
Arblet is a Tokyo based startup developing biometric cloud analytic tool and wearable device. Arblet aims to numericalize and visualize human behavior and body state to bring the future of wellness.