OPTIMISING PERSONAL MEDICAL INSIGHTS BY INTRODUCTING A SCALABLE HEALTH INFORMATICS APPLICATION

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HEALTH INNOVATION COMMUNITY

AIDH AUSTRALASIAN INSTITUTE OF DIGITAL HEALTH

OHIOH

Australian National University

BACKGROUND

"Our Health in Our Hands" (OHIOH), a strategic initiative by The Australian National University (ANU)

Brain Research
Volume 1832, 1 June 2024, 148827

Review

The use of event-related potentials in the investigation of cognitive performance in people with Multiple Sclerosis: Systematic review

Robin Vlieger, Duncan Austin, Deborah Apthorp, Elena Daskalaki, Artem Lensky, Jane Walton-Sonda, Hanna Suominen, Christian J. Lueck

Integrating Multiple Inputs Into an Artificial Pancreas System: Narrative Literature Review

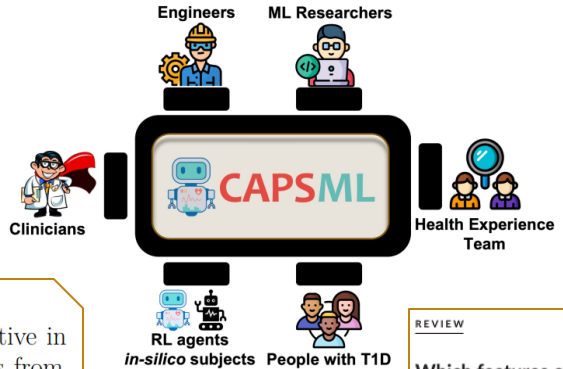
Chirath Hettiarachchi[1]; Elena Daskalaki[1]; Jane Desborough[2]; Christopher J Nolan[3, 4]; David O'Neal[5, 6]; Hanna Suominen[1, 7, 8]

Evaluating Effects of Resting-State Electroencephalography Data Pre-Processing on a Machine Learning Task for Parkinson's Disease

Robin VLIEGER [a,1], Elena DASKALAKI [a], Deborah APTHORP[b], Christian J. LUECK [a] and Hanna SUOMINEN [a,c]

Robust Feature Engineering for Parkinson Disease Diagnosis: New Machine Learning Techniques

Max Wang[1]; Wenbo Ge[1]; Deborah Apthorp[1, 2]; Hanna Suominen[1, 3, 4]



Finger Tapping Measures for Parkinson's Disease: Preliminary Evaluation of an Android Application for Data Collection in Australia

Hanna SUOMINEN[a,b,c,1], Mehika MANOCHA[a], Jane DESBOROUGH[a], Anne PARKINSON[a] and Deborah APTHORP[d]
[a]*The Australian National University (ANU), Australia*
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[c]*University of Turku, Finland*
[d]*University of New England, Australia*

2021 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)

Which Features of Postural Sway are Effective in Distinguishing Parkinson's Disease Patients from Controls? An Experimental Investigation

Wenbo Ge*, Deborah Apthorp*†, Christian Lueck‡§, and Hanna Suominen*¶

REVIEW

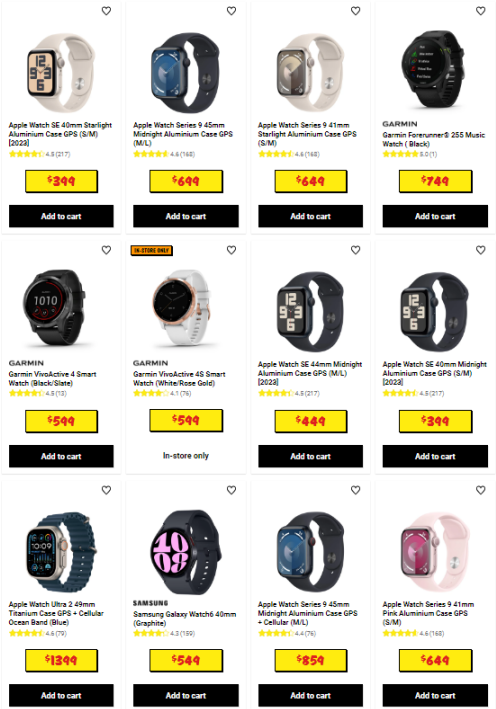
Brain and Behavior

WILEY

Which features of postural sway are effective in distinguishing Parkinson's disease from controls? A systematic review

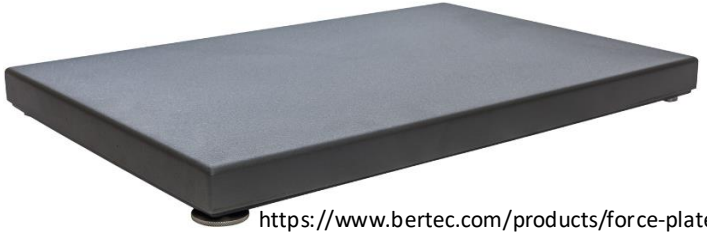
Wenbo Ge[1] | Christian J. Lueck[2,3] | Deborah Apthorp[1,4] | Hanna Suominen[1,5,6]

INTRODUCTION



https://www.jbhifi.com.au/collections/health-fitness-wearables/smart-watches

https://www.polar.com/au-en/sensors/h10-heart-rate-sensor



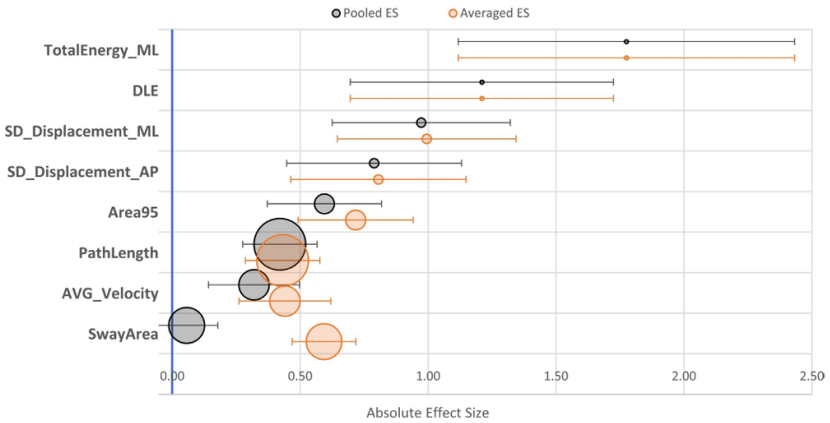
https://www.bertec.com/products/force-plates

METHODS

How to use SensAnalytics?

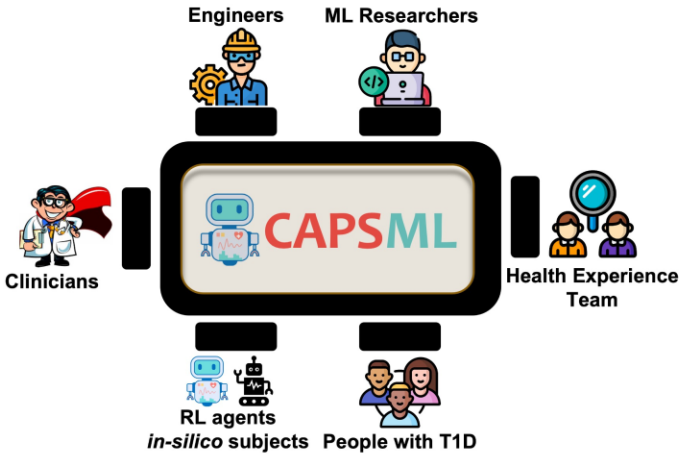
1. Selecting the sensor
2. Specifying an Analysis Type:
   - Individual or cohort
3. Data Upload: CSV (<200MB)
4. Preprocessing, Feature Extraction, & Visualisation
5. Analysis

RESULTS



Ge, W., Lueck, C. J., Apthorp, D., & Suominen, H. (2021). Which features of postural sway are effective in distinguishing Parkinson's disease from controls? A systematic review. Brain and Behavior, 11(1), e01929.

DISCUSSION



CONCLUSION

Commercial Sensors
e.g., iPhone, Apply Watch,
Samsung Galaxy Watch

SensAnalytics

Research Sensors
e.g., Zephyr Bioharness.
Bertec Force Plate

https://github.com/chirathyh/SensAnalytics

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THANK YOU

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