Esben Høegholm Lykke

PhD Student

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Intro

My name is Esben and I love diving into the world of data and getting lost in intriguing challenges. I have experience with scientific writing, crunching numbers with statistical analysis, visualizing data, exploring the wonders of machine learning, and sharing knowledge through teaching. On top of that, I've got a knack for project management and research methodologies.

When it comes to data-wrangling, R is my trusty sidekick. But hey, I'm no stranger to Python, Matlab, and SQL either. So, let's have some fun with data together!

Education

University of Southern Denmark *Odense, Denmark*

PhD in Exercise Epidemiology *October 2023*

- My work centers around creating methodologies that leverage machine learning techniques to detect non-wear and sleep periods in accelerometer data. This allows for the prediction of sleep quality metrics on a population level. My project is supervised by Associate Professor Jan Christian Brønd.

Aarhus University *Aarhus, Denmark*

MS in Sports Science, Human Physiology *January 2017*

- MS Thesis: Unprompted Vigorous Physical Activity is Associated With Higher Levels of Subsequent Sedentary Behaviour in Participants With Low Cardiorespiratory Fitness: a Cross-Sectional Study

Aarhus University *Aarhus, Denmark*

BS in Sports Science *June 2014*

- BS Thesis: The Strech-Shortening-Cycle in Plyometric Exercise Training

Relevant employments

Aarhus University, Department of Sport Science *Aarhus, DK*

Research Assistant *2018 - 2019*

- Analyses of accelerometer data and manuscript writing on two research projects supervised by Professor Kristian Overgaard.

University of Southern Denmark, Department of Sports Science and Clinical Biomechanics *Odense, DK*

Research assistant *2019 - 2020*

- Worked on systematic reviews as a member of the INTERLIVES consortium and prepared my PhD project.

Teaching experience

I have been/am an instructor on the following courses.

2023	**PhD course**: Data Science Skills for Health Researchers Using R and the Tidyverse (SDU)
2022-23	**MS course**: Data Science in Health Science (SDU)
2020-22	**BS course**: Applied Statistics (SDU)
2020	**BS course**: Project Managment with External Partner (SDU)
2020	**BS course**: Public health projects in practice (SDU)

Publications

1. Skovgaard, E. L., Roswall, M. A., Pedersen, N. H., Larsen, K. T., Grøntved, A., & Brønd, J. C. (2023). Generalizability and performance of methods to detect non-wear with free-living accelerometer recordings. *Scientific Reports*, *13*(1), 2496. https://doi.org/10.1038/s41598-023-29666-x

2. Mühlen, J. M., Stang, J., Skovgaard, E. L., Judice, P. B., Molina-Garcia, P., Johnston, W., Sardinha, L. B., Ortega, F. B., Caulfield, B., Bloch, W., Cheng, S., Ekelund, U., Brønd, J. C., Grøntved, A., & Schumann, M. (2021). Recommendations for determining the validity of consumer wearable heart rate devices: Expert statement and checklist of the INTERLIVE network. *British Journal of Sports Medicine*, *55*(14), 767–779. https://doi.org/10.1136/bjsports-2020-103148

3. Johnston, W., Judice, P. B., García, P. M., Mühlen, J. M., Skovgaard, E. L., Stang, J., Schumann, M., Cheng, S., Bloch, W., Brønd, J. C., Ekelund, U., Grøntved, A., Caulfield, B., Ortega, F. B., & Sardinha, L. B. (2021). Recommendations for determining the validity of consumer wearable and smartphone step count: Expert statement and checklist of the INTERLIVE network. *British Journal of Sports Medicine*, *55*(14), 780–793. https://doi.org/10.1136/bjsports-2020-103147

4. Skovgaard, E. L., Pedersen, J., Møller, N. C., Grøntved, A., & Brønd, J. C. (2021). Manual annotation of time in bed using free-living recordings of accelerometry data. *Sensors*, *21*(24), 8442. https://doi.org/10.3390/s21248442

5. Pedersen, K. K., Skovgaard, E. L., Larsen, R., Stengaard, M., Sørensen, S., & Overgaard, K. (2019). The applicability of thigh-worn vs. Hip-worn ActiGraph accelerometers during walking and running. *Journal for the Measurement of Physical Behaviour*, *2*(4), 209–217. https://doi.org/10.1123/jmpb.2018-0043

6. Skovgaard, E. L., Obling, K., Maindal, H. T., Rasmussen, C., & Overgaard, K. (2019). Unprompted vigorous physical activity is associated with higher levels of subsequent sedentary behaviour in participants with low cardiorespiratory fitness: A cross-sectional study. *European Journal of Sport Science*, *19*(7), 1004–1013. https://doi.org/10.1080/17461391.2019.1574905