CV

Johan Larsson December 2, 2018



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1 Education

1.1 Degrees

PhD in Statistics, Department of Statistics, Lund University

I am currently enrolled in the PhD program at the Department of Statistics at Lund University. My supervisor has yet to be announced.

Bachelor's degree in statistics, Lund University

I developed an algorithm for creating area-proportional Euler diagrams using ellipses. This work also resulted in a conference paper and oral presentation at the SetWR conference in Edinburgh.

2015 - 2017 Master's degree in medical science with a major in physical therapy, Lund University

In my masters thesis I design and piloted a randomized controlled trial.

2011 - 2014 Bachelor's degree in Physical Therapy, Lund University

For my bachelor thesis, me and my co-author traveled to Tokyo to interview physical therapists about their professional role and use of technology.

1.2 Courses

Data Mining and Visualization, 7.5 ECTS, Lund University **Linux Development Environment**, 7.5 ECTS, Umeå University **Statistical methods with R**, 7.5 ECTS, Karolinska Institute

Statistics: Bayesian methods, 7.5 ECTS, Lund University
Statistics: Probability and inference theory, 7.5 ECTS, Lund University

Statistics: Special assignment, 15 ECTS, Lund University **Statistics: Econometrics**, 7.5 ECTS, Lund University

Statistics: Time Series Analysis, 7.5 ECTS, Lund University

Statistics: Statistical theory, 7.5 ECTS, Lund University **Statistics: Sampling Techniques**, 7.5 ECTS, Lund University

Statistics: Basic Course, 30 ECTS, Lund University

2014 - 2015 Summer research course, 18 ECTS, Faculty of Medicine, Lund University

I worked as a research assistant at a specialized clinic for pain rehabilitation and presented a poster at EFIC in 2015 and IASP in 2016.

2013 – 2014 Summer research scholarship, 15 ECTS, Faculty of Medicine, Lund University

As a part of a stipend, I undertook a course in basic academic knowledge.

2 Work experience

Google Summer of Code, *The R Project for Statistical Computing*A project supervised by Toby Dylan Hocking and Michael Weylandt wherein which I translated the incremental stochastic gradient algorithm SAGA to R and implemented it to work for generalized linear models, such as Gaussian (univariate and multi-task), logistic (binomial and multinomial), Poisson, and Cox regression.

Physical therapist, The Department of Orofacial Pain and Jaw Function, Malmö University

Clinical work and quantitative assessment of sensory function.

Teacher Assistant, *The Department of Health Sciences, Lund University* I teach anatomy, palpation, and examination skills to students at the medical school of Lund University.

2014 - now Physical Therapist, *Vårdcentralen Södra Sandby, Region Skåne* Clinical work at a primary care center in southern Skåne.

2.1 Research

2015 - 2018 Research assistant, SMIL

SensoriMotor Integration Lund (SMIL) is a collaborative effort between Lund University, Skåne University Hospital, Malmö University, and Umeå University, in which we are assessing the utility of a gym-based treatment for patients with persistent neck pain.

Research assistant, The Department of Pain Rehabilitation, Skåne University Hospital

Together with supervisors Eva-Maj Malmström and Hans Westergren I studied patients with longstanding whiplash-associated disorders, which has so far resulted in one publication and two posters.

- Research assistant, Department of Clinical Sciences, Lund University
 As part of a research stipend from the Faculty of Medicine at Lund
 University, I under supervision of Eva-Ekvall Hansson and Michael
 Miller studied the gait of dizzy, elderly patients. This work resulted in
 two publications.
- Transcriber, Department of Health Sciences, Lund University

 For a brief period, I worked as a transcriber for a research project within gerontology.

2.2 Teaching

Teaching assistant, *Department of Physiotherapy, Lund University*I serve as a teaching assistant for students at the program of medicine.

2.3 Supervisor

2017 - 2019 Assistant Supervisor, bachelor's thesis, The Department of Orofacial Pain and Jaw Function, Malmö University

Supervision of two students at undergraduate level for a project regarding exercise for neck and jaw pain.

2017 – 2018 Assistant Supervisor, master's thesis, The Department of Orofacial Pain and Jaw Function, Malmö University

Supervision of two students at master's level for a project about biofeedback and posture.

2.4 Reviewer

- Gait & Posture (ISSN: 0966-6362)
- Journal of Clinical Interventions in Aging (ISSN: 1178-1998)
- Spine (ISSN: 0362-2436)
- Archives of Physical Medicine and Rehabilitation (ISSN: 0003-9993)

See publons.com/a/1299032 for additional information.

2.5 Miscellaneous

Network analyses, SBU, Stockholm, Sweden

2016 Conducting systematic reviews, HTA-o, Malmö, Sweden

3 Publications

- 1. Larsson J. Mapping physical therapy research: The geographical affiliations and methodological quality of 2,959 randomized controlled trials. *Physiotherapy Theory and Practice*. 2018 Jan;34(9):723–9. doi: 10.1080/09593985.2018.1423657
- 2. Westergren H, Larsson J, Freeman M, Carlsson A, Jöud A, Malmström E-M. Sex-based differences in pain distribution in a cohort of patients with persistent post-traumatic neck pain. *Disability and Rehabilitation*. 2017 Jan;40(9):1085–91. doi: 10.1080/09638288.2017.1280543

3. Larsson J, Miller M, Ekvall Hansson E. Vestibular asymmetry increases double support time variability in a counter-balanced study on elderly fallers. *Gait & Posture*. 2016 Mar;45:31–4. doi: 10.1016/j.gaitpost.2015.12.023

4. Larsson J, Ekvall Hansson E, Miller M. Increased double support variability in elderly female fallers with vestibular asymmetry. *Gait Posture*. 2015 Mar;41(3):820–4. doi: 10.1016/j.gaitpost.2015.02.019

3.1 Theses

- 5. Larsson J. Eulerr: Area-proportional euler diagrams with ellipses [Bachelor Thesis]. [Lund, Sweden]: Lund University; 2018.
- 6. Larsson J. Gym-based exercise therapy for patients with persistent neck pain: A research protocol for a randomized controlled trial [Master's Thesis]. [Lund, Sweden]: Lund university; 2017.
- 7. Najafi D, Larsson J. The professional role and technology use among physical therapists in Tokyo: A qualitative interview study [Bachelor Thesis]. [Lund, Sweden]: Lund University; 2014.

3.2 Conference papers

8. Larsson J, Gustafsson P. A case study in fitting area-proportional Euler diagrams with ellipses using eulerr. In: *Proceedings of International Workshop on Set Visualization and Reasoning*. Edinburgh, United Kingdom: CEUR Workshop Proceedings; 2018. p. 91.

3.3 Conference abstracts

- 9. Larsson J, Westergren H, Malmström E-M. Pain distribution after neck traumas: An analysis of 745 consecutive patients with persistent neck pain. In: IASP, editor. *IASP 2016: The World Congress on Pain.* Yokohama, Japan; 2016.
- 10. Westergren H, Larsson J, Malmström E-M. Pain distribution in 745 consecutive patients with persistent pain after whiplash trauma. In: EFIC, editor. *EFIC 2015: Translating evidence into practice.* Vienna, Austria; 2015.

3.4 Scientific communication

11. Larsson J. A letter to the editor regarding "Serratus anterior or pectoralis minor: Which muscle has the upperhand during protraction exercises?". *Manual Therapy*. 2016 Aug;24:e1. doi: 10/gcsk6d

4 Software packages

eulerr Area-Proportional Euler diagrams with ellipses.

https://CRAN.R-project.org/package=eulerr

qualpalr Automatic generation of qualitative color palettes using color difference

algorithms.

https://CRAN.R-project.org/package=qualpalr

komadown R Markdown templates based on the 'KOMA-Script' classes for LaTeX,

additionally offering cross-referencing via the 'bookdown' package.

https://CRAN.R-project.org/package=komadown

sgdnet Elastic Net-regularized Generalized Linear Models via the efficient SAGA

algorithm.

https://github.com/jolars/sgdnet

tactile Extensions to 'lattice', providing new high-level functions, methods for

existing functions, panel functions, and a theme.

https://CRAN.R-project.org/package=tactile