CV
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1 Education

2018 – 2024 **PhD in Statistics**, *Department of Statistics, Lund University*
Supervisors: *Jonas Wallin (main), Małgorzata Bogdan (co-supervisor)*
Note: *Parental leave Jan–Aug 2023*

2018 **Bachelor's Degree in Statistics**, *Lund University*
Title: *eulerr: Area-Proportional Euler Diagrams with Ellipses*
Supervisor: *Peter Gustafsson*

2 Professional Experience

2018 – 2024 **PhD Student**, *Department of Statistics, Lund University*

3 Publications

3.1 Published Articles

[1] **J. Larsson**, Q. Klopfenstein, M. Massias, and J. Wallin, "Coordinate descent for SLOPE," in *Proceedings of the 26th International Conference on Artificial Intelligence and Statistics*, F. Ruiz, J. Dy, and J.-W. van de Meent, Eds., ser. Proceedings of Machine Learning Research, vol. 206, Valencia, Spain: PMLR, Apr. 25–27, 2023, pp. 4802–4821. [Online]. Available: https://proceedings.mlr.press/v206/larsson23a.html.

[2] **J. Larsson** and J. Wallin, "The Hessian screening rule," in *Advances in Neural Information Processing Systems 35*, S. Koyejo, S. Mohamed, A. Agarwal, D. Belgrave, K. Cho, and A. Oh, Eds., vol. 35, New Orleans, USA: Curran Associates, Inc., Nov. 28–Dec. 9, 2022, pp. 15 823–15 835, ISBN: 978-1-71387-108-8. [Online]. Available: https://papers.nips.cc/paper%5C%5Ffiles/paper/2022/hash/65a925049647eab0aa06a9faf1cd470b-Abstract-Conference.html.

[3] T. Moreau, M. Massias, A. Gramfort, P. Ablin, P.-A. Bannier, B. Charlier, M. Dagréou, T. D. la Tour, G. Durif, C. F. Dantas, Q. Klopfenstein, **J. Larsson**, E. Lai, T. Lefort, B. Malézieux, B. Moufad, B. T. Nguyen, A. Rakotomamonjy, Z. Ramzi, J. Salmon, and S. Vaiter, "Benchopt: Reproducible, efficient and collaborative optimization benchmarks," in *Advances in Neural Information Processing Systems 35*, S. Koyejo, S. Mohamed, A. Agarwal, D. Belgrave, K. Cho, and A. Oh, Eds., vol. 35, New Orleans, USA: Curran Associates, Inc., Nov. 28–Dec. 9, 2022, pp. 25 404–25 421, ISBN: 978-1-71387-108-8. [Online]. Available: https://proceedings.neurips.cc/paper%5C%5Ffiles/paper/2022/hash/a30769d9b62c9b94b72e21e0ca73f338-Abstract-Conference.html.

[4] **J. Larsson**, "Look-ahead screening rules for the lasso," in *22nd European Young Statisticians Meeting – Proceedings*, Andreas Makridis, Fotios S. Milienos, Panagiotis Papastamoulis, Christina Parpoula, and Athanasios Rakitzis, Eds., Athens, Greece: Panteion University of Social and Political Sciences, Sep. 6–10, 2021, pp. 61–65, ISBN: 978-960-7943-23-1. [Online]. Available: https://www.eysm2021.panteion.gr/files/Proceedings%5C%5FEYSM%5C%5F2021.pdf.

[5] **J. Larsson**, M. Bogdan, and J. Wallin, "The strong screening rule for SLOPE," in *Advances in Neural Information Processing Systems 33*, H. Larochelle, M. Ranzato, R. Hadsell, M.-F. Balcan, and H.-T. Lin, Eds., vol. 33, Virtual: Curran Associates, Inc., Dec. 6–12, 2020, pp. 14 592–14 603, ISBN: 978-1-71382-954-6. [Online]. Available: https://papers.nips.cc/paper%5C%5Ffiles/paper/2020/hash/a7d8ae4569120b5bec12e7b6e9648b86-Abstract.html.

[6] **J. Larsson** and P. Gustafsson, "A case study in fitting area-proportional Euler diagrams with ellipses using eulerr," in *Proceedings of International Workshop on Set Visualization and Reasoning*, vol. 2116, Edinburgh, United Kingdom: CEUR Workshop Proceedings, Jun. 2018, pp. 84–91.

3.2 Theses

[7] **J. Larsson**, "Optimization and algorithms in sparse regression: Screening rules, coordinate descent, and normalization," Ph.D. dissertation, Department of Statistics, Lund University, Lund, Sweden, May 20, 2024, 277 pp.

[8] **J. Larsson**, "eulerr: Area-proportional Euler diagrams with ellipses," Bachelor thesis, Department of Statistics, Lund University, Lund, Sweden, 2018, 33 pp. [Online]. Available: http://lup.lub.lu.se/student-papers/record/8934042.

4 Talks

2024, Apr 10	**Normalization for class-imbalanced binary features in regularized regression**, *Uppsala Statistics Seminar Series*
2021, Oct 27	**Designing a Distance-Based Course in Data Visualization: Lessons Learned**, *Cramér Society Fall Meeting*
2021, Nov 16	**The Hessian Screening Rule**, *Seminar at the Faculty of Pure and Applied Mathematics, Wrocław University of Science and Technology*
2021, Sep 21	**The Hessian Screening Rule and Adaptive Lasso Paths**, *Statistics Seminar at the Department of Mathematical Statistics, Chalmers/Gothenburg University*
2021, Sep 9	**Look-Ahead Screening Rules for the Lasso**, *EYSM 2021*
2020, May 8	**The Strong Screening Rule for SLOPE**, *Statistical Learning Seminar*
2018, June 18	**A Case Study in Fitting Area-Proportional Euler Diagrams with Ellipses Using eulerr**, *SetVR 2018*

5 Teaching

5.1 Instructor

2020 – 2023	**Data Visualization**, *Department of Statistics, Lund University*
2019 – 2021	**Statistics: Basic Course**, *Department of Statistics, Lund University*

5.2   Teaching Assistant

2021   **Introduction to R Programming**, *Department of Statistics, Lund University*

2019 – 2020   **Data Mining and Visualization**, *Department of Statistics, Lund University*

2019 – 2021   **Statistics for Fire Engineers**, *Department of Statistics, Lund University*

2019   **Artificial Intelligence and Deep Learning Methods**, *Department of Statistics, Lund University*

5.3   Course Development

2020–2023   **Data Visualization**, *Department of Statistics, Lund University*
Distance-based course in data visualization for students on the undergraduate level.

6   Supervision and Mentorship

2023   **Bachelor's Thesis**, *The Department of Statistics, Lund University*
Title: Weather Factors and E. coli Concentration in Barnviken, Malmö – A Linear Mixed Model Approach
Student: Elias Gullberg

2023   **Bachelor's Thesis**, *The Department of Statistics, Lund University*
Title: Exploring the Impact of Pseudo and Quasi Random Number Generators on Monte Carlo Integration of the Multivariate Normal Distribution
Students: Marcus Stolz, Jonathan Christopher

2022   **Master's Thesis**, *Data Analysis and Business Analytics, Lund University*
Title: Interactive Network Visualization of Insurance Portfolios
Students: Gustavo Lemos Borba, Stella Sofia Sologaistoa Betancourt

2019 – 2021   **Google Summer of Code**, *The R Project for Statistical Computing*
Students: *Qincheng Liu (2019)*, *Akarsh Goyal (2020)*

7   Referee Service

2024   ICML, Computo

2023   Journal of Computational and Graphical Statistics

2022, 2021   NeurIPS

2022   ICML

8   Comittee Service

2020 – 2022   **Statistical Learning Seminar Series**, Main Organizer
https://statistical-learning-seminars.github.io/

9 Software

SLOPE **Generalized linear models penalized with the sorted L1 norm**
Author and maintainer, R, https://CRAN.R-project.org/package=SLOPE

benchopt **Reproducible, efficient and collaborative optimization benchmarks**
Contributor, Python, https://benchopt.github.io/

eulerr **Area-proportional Euler diagrams with ellipses**
Author and maintainer, R, https://CRAN.R-project.org/package=eulerr

10 Scholarships

2018 **Google Summer of Code**, *The R Project for Statistical Computing*
Project: *Fast Sparse Linear Models for Big Data with SAGA*

11 Contracted Work

2021 **WHO Antimicrobial Resistance Dashboard**
Contracted work to develop and deploy a visualization dashboard for WHO's Antimicrobial Resistance team in Europe.