

Rianne M. Schouten, PhD – Resume

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| Personal information | Date of birth: 11 May 1991; Nationality: Dutch; Married, Mother of 1 son (3 years old) Living in Eindhoven, the Netherlands |  |
| Contact information | Phone: +31 (0) 6 406 405 16; Email: riannemargarethaschouten@gmail.com | |
| Webpages | Personal: https://rianneschouten.github.io/ LinkedIn: https://www.linkedin.com/in/rianne-schouten-phd-5bb29491/ Google Scholar: https://scholar.google.nl/citations?hl=nl&user=xC56bhMAAAAJ/ | |

Education

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| 2025 | PhD in Data Mining, Eindhoven University of Technology, the Netherlands |
| 2017 | MSc in Methodology and Statistics, GPA: 4, Utrecht University, the Netherlands |
| 2015 | Intern @ Dutch Institute of Space Research |
| 2014 | 30 ECTS Social Sciences @ Utrecht University |
| 2013 | 30 ECTS Social Policy @ University of Amsterdam |
| 2012 | BSc in Medicine, Utrecht University, the Netherlands |

Experience

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| 2025 - Now | Postdoctoral researcher @ Eindhoven University of Technology, the Netherlands |
| 2020-2025 | PhD candidate @ Eindhoven University of Technology, the Netherlands |
| 2018-2020 | Developer Data & Analytics @ Samen Veilig Midden-Nederland; Database management, stakeholder communication, small team lead |
| 2017-2019 | Researcher Missing Data & Statistical Consultant @ Utrecht University, the Netherlands |
| 2017 | Data Scientist @ DPA Professionals; Consultancy & Traineeship |
| Nov-Dec 2016 | Staff Associate @ Columbia University in the City of New York |
| 2009-2016 | Several tutoring and teaching jobs |

Relevant co-creation experience

Collaborations and project management

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| 2025-Now | Project lead (Founder) | Feasibility study of new EdTech product |
| 2025-Now | Project lead | AlgebraKit, Eindhoven, the Netherlands |
| 2024-Now | Project member | Catharina Hospital Eindhoven |
| 2022-Now | Project lead | Turku Research Institute for Learning Analytics, Turku, Finland |
| 2022-Now | Project lead | Erasmus Medical Center (DEPAR), the Netherlands |
| 2020-2025 | Project management | EDIC Consortium; Progress reports, timeline and deliverables |
| 2020-2024 | Project lead | Netherlands Institute of Mental Health and Addiction |
| 2020-2022 | Project lead | Hospital Twente (ZGT), the Netherlands |
| 2017-2019 | Statistical consultant | Utrecht Medical Center, the Netherlands |

Open source software contributions

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| 2022-Now | Open source software | pyampute in Python |
| 2020-Now | Open source software | ampute in R-package mice |
| 2016 | Open source software | parlmice in R-package mice |

Research expertise

Grants and funding

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| 2024 | €40K | Personal NWO take-off grant to perform feasibility study of a new EdTech service |
| 2022 | €45K | Seed money grant to investigate potential new collaborations |

Awards and recognition

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| 2024 | Recognition as an Excellent Reviewer Research Track @ ECML PKDD |
| 2021, 2022 | Awards for Excellent student evaluations in the course Research Topics in Data Mining |
| 2021 | In top-3 of Best Poster during NWO Commit2Data Day |

Methodological expertise

Methods: Subgroup Discovery, Clustering, Explainable Artificial Intelligence, Interpretable Machine Learning, Missing Data, Causal Reasoning, Counterfactual Explanations, Recommender Systems

Data representation: Tabular, Time Series, Multilevel, Longitudinal, Sequential, Repeated Cross-Sectional

Applications: Healthcare, Public health, Educational domain, Social sciences

Publications and citations

433 citations, h-index 7, i10-index 4, 6 journal articles, 11 conference proceedings papers, 13 workshop contributions without proceedings, 3 open source software contributions, 1 thesis, 3 under review.

Full list of publications can be found through [Google Scholar](#).

Community service

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| 2020-Now | Reviewer Journals | DAMI, ML, Statistics in Medicine, Biomedical J., JRSSB |
| 2024-Now | Reviewer Conferences | EWAf, ECML PKDD |
| 2025 | Session Chair | @ EWAf |
| 2024 | Proceedings Chair | @ ECML PKDD |

Research visits

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| 2025 | Prof. Inge Molenaar | @ Radboud University | 1 day, in Sept. |
| 2025 | Dr. Abe Hofman, Dr. Alexander Savi | @ University of Amsterdam | 1 day, in Sept. |
| 2025 | Prof. Hendrik Blockeel, Prof. Jesse Davis | @ Leuven University | 2 days |
| 2025 | Prof. Tijl de Bie, Prof. Jefrey Lijffijt | @ Ghent University | 2 days |
| 2025 | Prof. Barbara Hammer | @ Bielefeld University | 1 week |
| 2025 | Prof. Monique Tabak | @ University of Twente | 1 day |
| 2024 | Dr. Marcos L.P. Bueno | @ Radboud University | 1 day |
| 2016 | Prof. Andrew Gelman | @ Columbia University | 2 months |

Invited talks and news

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| 2025 | Colloquium talks | @ Leuven, Ghent, Bielefeld | EMM for Hierarchical Data |
| 2025 | Info-topic | @Cursor | EMM for Hierarchical Data |
| 2024 | Guest-lecture | @ Radboud University | Exceptional Model Mining |
| 2021 | Colloquium talk | @ EAISI Eindhoven | Exceptional lifestyle behaviour |
| 2020 | Colloquium talk | @ Roche | Treatment Effects |
| 2019 | Invited talk | @ R-ladies Amsterdam | Workshop on MD Methods |
| 2018 | Symposium contr. | @ ICT Open | MD Methods |
| 2018 | Symposium contr. | @ Eur. Women in Technology | Workshop on MD Methods |
| 2018 | Symposium contr. | @ sat-R-Day | MD Methods |
| 2018 | Invited contr. | @ Data Science Hackathon | Hackathon on MD Methods |
| 2017 | Invited talk | @ Amst-R-Dam | Generating Values |
| 2017 | Conference contr. | @ UserR! | Generating Missing Values |

Teaching

Lecturing

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| 2024 | Research Topics in Data Mining | Master-level | Lead track with 50 students |
| 2022 | Research Topics in Data Mining | Master-level | 2 lectures, lead 5 group projects |
| 2021 | Research Topics in Data Mining | Master-level | 2 lectures, lead 5 group projects |
| 2020 | Foundations of Data Mining | Master-level | Organization, Q&A, exercises |
| 2015, 2016 | Survey Research | Post-graduate | Organization, 4 practicals |

Supervision

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| 2024-Now | PhD candidate | Lieke van den Biggelaar | EMM for Time Series data |
| 2023-Now | PhD candidate | Emmanuel C. Chukwu | CFEs for TSC |
| 2025-Now | MSc Thesis | Abdullahi Farah | Numerical Optimization for EMM |
| 2025 | 4 BSc Theses | 4 students | MD in Longitudinal Data |
| 2025 | 4 BSc Theses | 4 students | SD in Longitudinal Data |
| 2024 | MSc Thesis | Haoqi Guo | Diversity and Feasibility of CFEs |
| 2024 | MSc Thesis | Lieke van den Biggelaar | Exceptional Atrium Fibrillation |
| 2023 | MSc Thesis | Victoria Tascau | MD in Longitudinal Data |
| 2022 | MSc Thesis | Mika van Loon | Bootstrap Hypothesis Tests for SD |
| 2022 | Internship@Signify | Varun Kamat | Recommendation tool |
| 2021 | Research Proposal | Isabel van den Heuvel | Fair ML Algorithms |
| 2021 | Research Proposal | Mats Verbraak | MD for Prediction |
| 2021 | MSc Thesis | Bart van Dooren | Predicting Cardiovascular Risk |

Additional (doctorate) training

University Teaching Qualification Program

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| 2022 | Foundations |
| 2022 | Facilitating Learning |
| 2022 | Assessment |

Other training and courses

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| 2025 | Google Prompt Engineering through Coursera |
| 2024 | Scientific Integrity for PhD Candidates |
| 2022 | Communication Styles |
| 2021 | Integrating Learning and Reasoning as part of SIKS |
| 2020 | Fluxicon Introduction to Disco (Process Mining) |
| 2020 | PhD Project Planning and Time Management |
| 2020 | Stanford Machine Learning through Coursera |
| 2019 | 461 Querying Microsoft SQL Server 2012/2014 |

Testimonials

Prof. Mykola Pechenizkiy

Promotor, TU/e
m.pechenizkiy@tue.nl

*"[Rianne] is highly independent and motivated, formulating and successfully pushing forward the research questions resolved in her thesis. Rianne has a **strong intuition in search for relevant problem formulations**; she grounds her research approach in the specifics of the application domains. "*

Dr. Wouter Duivesteijn

Co-promotor. TU/e
w.duivesteijn@tue.nl

*"[Rianne] went far beyond research, supervising student groups and master thesis projects of individual students, teaching lectures and later coordinating an entire track within a master-level course, [...]. Rianne obtained quite a bit of funding in NWO and EWUU alliance calls. These would be normal activities for a faculty-level academic career, but when you're still working on your PhD this is quite a bit **ahead of the curve.**"*

Prof. Pekka Räsänen

Clinical Neuropsychologist
Turku Research Institute for
Learning Analytics, Finland
pekka.j.rasanen@utu.fi

*"[Rianne] **swiftly mastered our terminology** and objectives, systematically engaging stakeholders to align goals and identify research directions. Rianne also recognized gaps in expertise and ensured our team was strengthened with the necessary collaborators."*

Prof. Edith de Leeuw

Supervisor in 2015
Utrecht University

*"Rianne was a first class assistant at our summer school courses. Not only was all material prepared extremely punctual and without errors, she also got **very high student evaluations**. I can wholeheartedly recommend Rianne!"*

Jin Ouyang

Master student in 2021
Research Topics in Data Mining

*"I took a lot of courses last year, but **I like your instructions the most**. It is not only because of your professional knowledge, but also because of your personality of being kind, patient, responsible."*

Potential referees

Prof. Barbara Hammer
Prof. Monique Tabak
Prof. Pekka Räsänen

Bielefeld University
University of Twente
University of Turku

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Full list of publications

2025 Schouten, R.M. On the role of prognostic factors and effect modifiers in unraveling population heterogeneity. Presented at Causal Representation Learning Workshop NeurIPS 2024. Accepted for publication in ECML PKDD 2025 Workshop Proceedings.

2025 van den Biggelaar, L., **Schouten, R.M.**, de Bie, A., Bouwman, A., & Duivesteijn, W. Characterizing the Risk of Atrial Fibrillation in Cardiac Patients with Exceptional Electrocardiogram Phenotypes. Accepted for publication at KDD25.

2025 Schouten, R.M. Exceptional Model Mining for Hierarchical Data. PhD thesis.

2024 van den Berg, N. T., Broekgaarden, B. O., Mahieu Dionysia, P., Martens, J. G., Niederle, J., **Schouten, R.M.** & Duivesteijn, W. Generating MNAR missingness in image data, with additional evaluation of MisGAN. Accepted for presentation at BNAIC/BeNeLearn 2024.

2024 Schouten, R.M., Stevens, G.W.J.M., van Dorsselaer, S.A.F.M., Duinhof, E.L., Monshouwer, K., Pechenizkiy, M. & Duivesteijn, W. Analyzing the interplay between societal trends and socio-demographic variables with local pattern mining: Discovering exceptional trends in adolescent alcohol use in the Netherlands. Accepted for publication in post-proceedings at BNAIC/BeNeLearn 2024.

2024 Schouten, R.M., Duivesteijn, W., Rasanen, P., Paul, J.M., & Pechenizkiy, M. Exceptional Subitizing Range: Exploring Mathematical Abilities of Finnish Primary School Children with Piecewise Linear Regression. In: Proc. ECML PKDD, pp. 66-82.

- 2023 Schouten, R.M.**, Tascau, V., Ziegler, G.G., Casano, D., Ardizzone, M., & Erotokritou M.A. Dropping incomplete records is (not so) straightforward. In: Proc IDA, pp. 379-391.
- 2022 Verhaegh, R.F.A.**, Kiezebrink, J.J.E., Nusteling, F., Rio, A.W.A., Bendicsek, M.B., Duivesteijn, W. & **Schouten, R.M.** A Clustering-inspired Quality Measure for Exceptional Preferences Mining — Design Choices and Consequences. In: Proc. DS, pp. 429–444.
- 2022 Van der Haar, J.F.**, Nagelkerken, S.C., Smit, I.G., van Straaten, K., Tack, J.A., **Schouten, R.M.** & Duivesteijn, W. Efficient Subgroup Discovery Through Auto-Encoding. In: Proc. IDA, pp. 327-340.
- 2022 Schouten, R.M.**, Duivesteijn, W. & Pechenizkiy, M. Exceptional Model Mining for Repeated Cross-Sectional Data (EMM-RCS). In: Proc. SDM, pp. 585-593.
- 2022 Schouten, R.M.**, Bueno, M.L.P., Duivesteijn, W. & Pechenizkiy, M. Mining Sequences with Exceptional Transition Behaviour of Varying Order using Quality Measures based on Information-Theoretic Scoring Functions. Data Mining and Knowledge Discovery, 36: 379-413.
- 2021 Schouten, R.M.** & Vink, G. The dance of the mechanisms: How observed information influences the validity of missingness assumptions. Sociological Methods & Research, 50(3): 1243-1258.
- 2020 IJsselhof R.**, Duchateau S, **Schouten R.M.**, Slieker M, Hazekamp M & Schoof P. Long-Term Follow-Up of Pericardium for the Ventricular Component in Atrioventricular Septal Defect Repair. World Journal for Pediatric and Congenital Heart Surgery, 11(6): 742-747.
- 2019 IJsselhof R.J.**, Duchateau S.D.R., **Schouten R.M.**, Freund, M.W., Heuser, J., Fejzic, Z., Haas, E., Schoof, P.H. & Slieker, M.G. Follow-up After Biventricular Repair of the Hypoplastic Left Heart Complex. European Journal of Cardiothoracic Surgery, 57(4): 644-651.
- 2018 Schouten R.M.**, Lugtig, P. & Vink, G. Generating missing values for simulation purposes: A multivariate amputation procedure. Journal of Statistical Computation and Simulation, 88(15): 1909-1930.
- 2017 Kappen, I.F.P.M.**, Bittermann, G.K.P., **Schouten, R.M.**, Bittermann, D., Etty, E., Koole, R., Kon, M., Van der Molen, M. & Breugem, C.C. Long-term mid-facial growth of patients with a unilateral complete cleft of lip, alveolus and palate treated by two-stage palatoplasty: cephalometric analysis. Clinical Oral Investigations, 21: 1801-1810.
- 2016 de Vries, C.P.**, **Schouten, R.M.**, Van der Kuur, J., Gottardi, L., & Akamatsu, H. (2016) [Microcalorimeter pulse analysis by means of principle component decomposition. In: Proc. SPIE 9905, Space Telescopes and Instrumentation 2016: Ultraviolet to Gamma Ray, 99055v. DOI: 10.1117/12.2231627