


# Rianne M. Schouten, PhD – Resume

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<b>Personal information</b>	Date of birth: 11 May 1991; Nationality: Dutch; Married, Mother of 1 son (3 years old) Living in Eindhoven, the Netherlands	
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## At a glance

### Education

<b>2025</b>	PhD in Data Mining, Eindhoven University of Technology, the Netherlands
<b>2017</b>	MSc in Methodology and Statistics, GPA: 4, Utrecht University, the Netherlands
<b>2012</b>	BSc in Medicine, Utrecht University, the Netherlands

### Work experience

<b>2025 - Now</b>	Postdoctoral researcher @ Eindhoven University of Technology, the Netherlands
<b>2020-2025</b>	PhD candidate @ Eindhoven University of Technology, the Netherlands
<b>2017-2019</b>	Researcher Missing Data & Statistical Consultant @ Utrecht University, the Netherlands
<b>2018-2020</b>	Developer Data & Analytics @ SVMN; Stakeholder communication & Small team lead
<b>2017</b>	Data Scientist @ DPA Professionals; Consultancy & Traineeship

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## Relevant co-creation experience

### Collaborations and project management

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

### Open source software contributions

<b>2022-Now</b>	Open source software	<a href="#">pyampute</a> in Python
<b>2020-Now</b>	Open source software	<a href="#">ampute</a> in R-package mice
<b>2016</b>	Open source software	<a href="#">parlmice</a> in R-package mice

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## Academic career

### Grants and funding

<b>2024</b>	Personal NWO take-off grant of €40K To investigate valorization potential of our methodology; application in EdTech
<b>2022</b>	Seed money grant of €45K On Better Imputation by Generative Adversarial NeTworks, w/ Prof. Stef van Buuren et al.

## Awards and recognition

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

## Research visits

2025	Prof. Hendrik Blockeel, Prof. Jesse Davis	@ Leuven University	3 days, in August
2025	Prof. Tijl de Bie, Prof. Jeffrey Lijfijt	@ Ghent University	2 days, in August
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

## Research expertise

**Methods:** Subgroup Discovery, Exceptional Model Mining, Local Pattern Mining, Missing Data, Heterogeneous Treatment Effects, Mixed-Effects Models, (Dynamic) Bayesian Networks, Causal Diagrams, Counterfactual Explanations, Causality

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

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

## Publications and citations

433 citations, h-index 7, i10-index 4. Full list of publications

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 below.](#)

## Community service

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

## Invited talks and news

2025	Colloquium talk	@ Bielefeld University	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	Heterogeneous 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

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## Teaching

### Experience

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

<b>2015, 2016</b>	Survey Research	Post-graduate	Organization, 4 practicals
<b>2010-2012</b>	Homework Institute	VO level	Supervising $2 \times 10$ students p/week
<b>2003-2009</b>	Independent tutoring	VO level	10 students in total, all subjects

## Supervision

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

## Training as part of University Teaching Qualification Program

<b>2022</b>	Foundations
<b>2022</b>	Facilitating Learning
<b>2022</b>	Assessment

## Additional (doctorate) training

### Training and courses

<b>2024</b>	Scientific Integrity for PhD Candidates
<b>2022</b>	Communication Styles
<b>2021</b>	Integrating Learning and Reasoning as part of SIKS
<b>2020</b>	Fluxicon Introduction to Disco (Process Mining)
<b>2020</b>	PhD Project Planning and Time Management
<b>2019</b>	461 Querying Microsoft SQL Server 2012/2014

## Testimonials and potential referees

### Prof. Mykola Pechenizkiy

Promotor, TU/e  
[m.pechenizkiy@tue.nl](mailto: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](mailto: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](mailto: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."*

### Potential referees

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

Bielefeld University  
University of Twente  
University of Turku

[bhammer@techfak.uni-bielefeld.de](mailto:bhammer@techfak.uni-bielefeld.de)  
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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.E.A., Kiezebrink, J.J.E., Nusteling, E., 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