

# Rianne M. Schouten – Resume

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## Research

**Feb 2020 - Present** **Data Mining Group, Data & AI Cluster, Eindhoven University of Technology**  
*PhD Candidate*

I study the Exceptional Model Mining framework; a local pattern mining technique seeking subgroups in a population that somehow behave exceptionally. Specifically, we work on developing solutions for EMM with hierarchical data. My promotor and co-promotor are [prof. Mykola Pechenizkiy](#) and [dr. Wouter Duivesteijn](#).

Expected to defend in Jan. 2025

**June 2017 - May 2019** **Department of Methodology and Statistics, University of Utrecht**  
*Researcher in the field of Missing Data*

My research focused on the evaluation of missing data methods including the generation of synthetic data, generation of missing values and experimental designs. My supervisors were [dr. Gerko Vink](#) and [prof. Stef van Buuren](#).

**Nov 2016 - Dec 2016** **Columbia University in the City of New York**  
*Staff Associate of Prof. Andrew Gelman*

As part of the STAN development team, I assisted dr. Gerko Vink and Prof. Andrew Gelman with their research and software development.

## Core publications

An overview of all my publications can be found at [RianneSchouten.github.io](https://RianneSchouten.github.io).

**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** **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.

**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.

## Teaching

**Feb 2020 - Present**    **Data Mining Group, Data & AI Cluster, Eindhoven University of Technology**  
*PhD-TA*

I am teaching in the MSc course *Research Topics in Data Mining*, where we guide MSc students through an entire research cycle, starting from finding a research gap to developing an innovative method, designing an experiment and presenting findings in a publishable manuscript. Several projects have resulted in publications at, among others, IDA and DS.

In both 21/22 and 22/23 I received an **award for excellent teaching**.

Furthermore, I am taking part in the **University Teaching Qualification (UTQ) training program** at TU/e. I am halfway there.

**Feb 2020 - Present**    **Data Mining Group, Data & AI Cluster, Eindhoven University of Technology**  
*Supervising MSc thesis students*

About 10 so far.

**May 2015 - April 2017**    **Summer school Utrecht**  
*Teaching Assistant*

I have taught in two summer school courses, both at an advanced MSc level: Survey Research: Design, Implementation and Data Processing and Survey Research: Statistical Analysis and Estimation. My work was appreciated as follows by [Prof. Edith de Leeuw](#):

*“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!”*

## Other Employment

**March 2018 - Jan 2020**    **Samen Veilig Midden-Nederland**

*Developer Data & Analytics*

It was my job to structure and standardize the analyses of sensitive and highly classified data. On the one hand I took an active part in writing the SQL queries and performing the calculations in R, Logi Analytics and Power BI. On the other hand, I oversaw the system requirements and allocated work to other developers and stakeholders.

**April 2017 - Feb 2018**    **DPA Professionals - Excellence Programme for Data Science**

*Missing Data Specialist / Data Scientist*

Obtained a broad introduction to everything related to applying data analysis methods in industry, including challenges in data engineering.

## Education

**2015 - 2017**    **Methodology and Statistics for the Behavioral, Biomedical and Social Sciences**

*Research MSc, GPA: 4.0*

This research master's programme focuses on the methodological and statistical aspects of social and biomedical research. I especially enjoyed delving into the mathematical background of analysis techniques.

**Jan 2016 -** **MSc Thesis period**  
**May 2017** *Software development in R*

During my thesis, we developed a procedure to generate missing data in complete datasets. I implemented the procedure in R-function [ampute](#) and it is now part of R-package MICE. Worldwide, people are using 'ampute' and I am still regularly advising and assisting researchers with their missing data and amputation problems.

**Sep 2015 -** **SRON, Dutch Institute of Space Research**  
**Dec 2015** *Internship, Grade: 9.0*

At SRON, I applied Principal Component Analysis in a Physics context and designed an extensive simulation study. The work resulted in a SPIE conference paper.

## Competencies

Ability to learn – Analytical skills – Perseverance – Assertiveness – Results-oriented way of working – Independence – Honesty – Problem solving – Discipline