# Rianne M. Schouten – Resume


| | | | |
|---|---|---|---|
| **City** | Eindhoven, the Netherlands | **Email** | r.m.schouten@tue.nl |
| **Nationality** | Dutch | **LinkedIn** | /RianneSchouten |
| **Mobile Phone** | +31 (0) 6 406 405 16 | **Webpage** | RianneSchouten.github.io |


## Research

An overview of my publications can be found at RianneSchouten.github.io.

**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 Dec. 2024

**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.

## Publications


**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, to appear.

**2023** **Schouten, R.M.**, Tascau, V., Ziegler, G.G., Casano, D., Ardizonne, 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, F., 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. Microcalorimeter pulse analysis by means of principle component decomposition. In: Proc. SPIE, 99055v. https://doi.org/10.1117/12.2231627

## 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.

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

About 6 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 - May 2017** **MSc Thesis period**
*Software development in R*

During my thesis, we developed a procedure to generate mising 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 - Dec 2015** **SRON, Dutch Institute of Space Research**
*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