

# Madelon Hulsebos

Amsterdam, Netherlands | m.hulsebos@uva.nl | madelonhulsebos.github.io

Interested in systems that capture table semantics using machine learning, and down-stream applications like data integration, search and validation. My research is motivated by challenges in practice.

## EDUCATION

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University of Amsterdam – Amsterdam, Netherlands  
PhD, Computer Science

2020 – present

Delft Institute of Technology – Delft, Netherlands  
MSc, Computer Science  
BSc, Technology, Policy and Management

2016 – 2018

2011 – 2015

## ACADEMIC EXPERIENCE

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University of Amsterdam – Amsterdam, Netherlands  
*PhD Researcher, INDE Lab*

2020 – present

- Proposed a research agenda aimed at improving systems that detect table semantics in practice.
- Advised by Prof. Paul Groth and co-advised by Çağatay Demiralp from Sigma Computing.

Massachusetts Institute of Technology – Cambridge, Massachusetts, United States  
*Visiting Collaborator, MIT Media Lab*

2018 – 2019

- Led and maintained a research project on semantic table understanding.
- Contributed to a data visualization training and benchmarking dataset.

## INDUSTRY EXPERIENCE

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Sigma Computing – San Francisco, California, United States  
*Research Intern*

2021 – present

- Developed a framework and system for deploying semantic table understanding systems in practice.
- Contributed to an interactive business analysis system.
- Published the resulting papers at the Conference of Innovative Data Systems Research.

KPN, HEINEKEN – Rotterdam, Amsterdam  
*Data Scientist*

2019 – 2021

- Developed and integrated an ML system for financial forecasting that produced more accurate forecasts.
- Built two ML tools for evaluating marketing campaigns based on causal inference and Bayesian modeling.
- Mentored junior data scientists and analysts, initiated a reading group and implemented scrum processes.
- Gave presentations and tutorials on data validation, software practises and transfer learning.

## ACADEMIC SERVICE

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Program committee, WWW (Industry track)

2022

Program committee, EDBT (Industry track)

2022

Reviewer, NeurIPS (Datasets & Benchmarks track)

2021

Organizing committee, SemTab challenge

2021

## TEACHING

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Delft Institute of Technology – Delft, Netherlands

*Graduate Teaching Assistant, Pattern Recognition & Web Information Systems groups*

2017 – 2018

- TA for the MSc courses: Pattern Recognition (IN4085), Web Science & Engineering (IN4252).
- Supported 250+ graduate students throughout projects and lab sessions.
- Evaluated student assignments, projects and presentations.

Aalto University – Helsinki, Finland

*Research and Teaching Assistant, Machine Learning for Big Data*

2017

- Developed assignments for the course “Machine Learning: Basic Principles” (CS-E3210) with 500+ students.
- Conducted experiments for semi-supervised learning over networks and presented the work at ICASSP.

## SELECTED PUBLICATIONS

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Hulsebos, M., Gathani, S., Gale, J., Dillig, I., Groth, P., Demiralp, C. “Making Table Understanding Work in Practice” [abstract], CIDR (2022).

Hulsebos, M., Demiralp, C., Groth, P. “GitTables: A Large-Scale Corpus of Relational Tables”, arXiv preprint arXiv:2106.0725 (2021).

Zhang, D., Suhara, Y., Li, J., Hulsebos, M., Demiralp, C., Tan, W. “Sato: Contextual semantic type detection in tables”, in Proceedings of the VLDB Endowment, 2020.

Hulsebos, M., Hu, K., Bakker, M., Zraggen, E., Satyanarayan, A., Kraska, T., Demiralp, C., Hidalgo, C. “Sherlock: A deep learning approach to semantic data type detection”, in ACM SIGKDD. ACM, 2019.

Hu, K., Gaikwad, N., Hulsebos, M., Bakker, M., Zraggen, E., Hidalgo, C., Kraska, T., Li, G., Satyanarayan, A., Demiralp, C. (2018) “VizNet: Towards a large-scale visualization learning and benchmarking repository”, in ACM CHI. ACM, 2019.

## BOARD MEMBERSHIP

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UniPartners Delft – Delft, Netherlands

*Supervisory Board Member*

2017 – present

- Supervise the financial and strategic positions of the company.
- Implemented structured financial control, KPI oriented leadership and a supervision cycle.

*Executive Board Member*

2015 – 2016

- Controlled and optimized the quality of internal and external products and processes.
- Daily management of projects, contributing to a revenue of over €100 K.
- Moderated the CRM system (Salesforce) and trained 10+ boards.