Madelon Hulsebos

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EDUCATION

Doctor of Philosophy 2020 - present
Computer Science, University of Amsterdam.

Master of Science 2016 - 2018
Computer Science, TU Delft.

Pre-masters 2014 - 2016
Computer Science, TU Delft.
Philosophy of Natural Sciences, Leiden University.

Bachelor of Science 2011 - 2015
Technology, Policy and Management, TU Delft.

INDUSTRY EXPERIENCE

Research Intern 2021 - present
Software Engineering, Sigma Computing.
- Developing methods for semantic column type detection in practice.
- Contributing to an interactive data analysis system.
- Supporting the implementation of the developed method in production.
- Publishing the developed solutions in scientific conferences.

Data Scientist 2020 - 2021
Global Analytics, The HEINEKEN Company.
- Built scalable and robust AI products to optimize marketing strategies with an estimated impact of $60M.
- Mentored 2 data scientists and 2 analytical consultants.
- Presented on AI topics, data observability and software practices. Initiated discussion groups for the Data Science community.

Data Scientist 2019 - 2020
Finance Analytics, KPN.
- Developed a more accurate and fine-grained financial forecasting product.
- Implemented Scrum processes and adopted the Scrum Master role.

ACADEMIC EXPERIENCE

PhD researcher 2020 - present
Intelligent Data Engineering (INDE) Lab, University of Amsterdam
- Research on semantic table understanding to facilitate data validation, search and integration. Currently building a large repository of tables.

Visiting Collaborator 2018 - 2019
Media Lab, Massachusetts Institute of Technology
- Led a research project on semantic table understanding using NLP and DL.
- Contributed to a data visualization training and benchmarking repository.

Graduate Teaching Assistant 2017 - 2018

Pattern Recognition & Web Information Systems, TU Delft.
- Provided support to 250+ graduate students in multiple courses.
- Evaluated student assignments, projects and presentations.

Research and Teaching Assistant 2017 - 2017

Machine Learning for Big Data, Aalto University.
- Designed the assignments of an ML course with 500+ students.
- Built research experiments for semi-supervised learning over networks.

ADDITIONAL EXPERIENCE

Member of the Supervisory Board 2017 - present

UniPartners Delft, consulting sector.
- Supervising the long-term policies pursued by the executive board.
- Inspecting financial statements and
- Improved the effectiveness by increasing financial control, improving the meeting structure and motivating objective oriented leadership.

Member of the Executive Board 2015 - 2016

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

SKILLS

General	mentoring, workshop organization, consulting, Scrum, Agile.
Research	natural language processing, knowledge bases, weak supervision, deep learning.
Data science	machine learning, bayesian modeling, causal inference, computer vision, statistics, data validation, data visualization.
Languages	Python, Java, Matlab, R, Visual Basic, LaTeX.
Tools	Scikit-learn, TensorFlow, Keras, PyStan, Stanford CoreNLP, NLTK, Git, Airflow.

PUBLICATIONS

Zhang, D., Suhara, Y., Li, J., **Hulsebos, M.**, Demiralp, C., Tan, W. "*Sato: Contextual semantic type detection in tables*", accepted to VLDB (acceptance rate 17%), VLDB, 2020.

Hulsebos, M., Hu, K., Bakker, M., Zgraggen, E., Satyanarayan, A., Kraska, T., Demiralp, C., Hidalgo, C. "*Sherlock: A deep learning approach to semantic data type detection*", in ACM SIGKDD (acceptance rate 14%). ACM, 2019.

Hu, K., Gaikwad, N., **Hulsebos, M.**, Bakker, M., Zgraggen, 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 (acceptance rate 24%). ACM, 2019.

Jung, A., **Hulsebos, M.** (2018) "*The Network Nullspace Property for compressed sensing over networks*", in IEEE ICASSP (acceptance rate 48%). IEEE, 2018.