Ritten Roothaert, MSc.

✉ h.m.roothaert@gmail.com   🔗 h m roothaert
🌐 https://ritten11.github.io/about/

Employment History

2023 – ⋯⋯ 🔖 **Ph.D. in Hybrid Intelligence**, Vrije Universiteit Amsterdam
Project title: *Hybrid Explainable Workflows for Security and Threat Intelligence*

2018 – 2024 🔖 **Teaching assistant**, University of Groningen / Vrije Universiteit Amsterdam
Courses:
- (1x) Knowledge Representation on the Web - M.Sc.
- (1x) Logical Aspects of Multi-Agent systems - M.Sc.
- (1x) Behavioral Biology - B.Sc.
- (2x) Artificial Intelligence 1 - B.Sc.
- (2x) Object Oriented Programming - B.Sc.

Education

2023 – ⋯⋯ 🔖 **Ph.D. in Hybrid Intelligence, Vrije Universiteit**
Project title: *Hybrid Explainable Workflows for Security and Threat Intelligence*

2020 – 2022 🔖 **M.Sc. Artificial Intelligence, University of Groningen**
Thesis title: *Improving Data Assimilation Approach for Estimating CO_2 Surface Fluxes Using ML* (thesis - code). Average grade: 8.3

2016 – 2020 🔖 **B.Sc. Artificial Intelligence, University of Groningen**
Thesis title: *Using reinforcement learning to fight forest fires: Comparing CMC with CoSyNE* (thesis - code). Average grade: 7.6

Research Publications

Conference Proceedings

[1] S. Verkijk, R. Roothaert, R. Pernisch, and S. Schlobach, "Do you catch my drift? on the usage of embedding methods to measure concept shift in knowledge graphs," in *Proceedings of the 12th Knowledge Capture Conference 2023*, ser. K-CAP '23, Pensacola, USA: Association for Computing Machinery, 2023, pp. 70–74, ISBN: 9798400701412. 🔗 DOI: 10.1145/3587259.3627555.

Skills

Languages 🔖 Strong reading, writing, and speaking competencies in English and Dutch.
Basic understanding of German, Norwegian, and Spanish.

Coding 🔖 Python, Java, RDF, SPARQL, LaTeX, HTML, CSS, JavaScript

Frameworks 🔖 ACT-R, GraphDB, rdflib, owlready2, PyTorch

Misc. 🔖 Coaching, Teaching, Rowing, Agriculture, .git, Safe Microbial Techniques.

Projects

Machine Learning   🔖 ML approach on optimizing alpha-amylase production in *Saccharomyces spp.* (report - code)

🔖 Comparing different feature extraction techniques on time series classification with a feedforward neural network (report - code)

Epistemic Logic   🔖 Modeling the Resistance game using epistemic logic (report - code)

Multi-agent Systems   🔖 Modeling the spread of SARS-Cov-2 in public trains (report - code)

Miscellaneous Experience

Awards and Achievements

2024   🔖 **3rd place research task force project report**, International Semantic Web Summerschool (ISWS) 2024

2021   🔖 **1st prize over-graduate environmental track**, International Genetically Engineered Machine (iGEM) 2021.

🔖 **Top-10 over-graduate team**, International Genetically Engineered Machine (iGEM) 2021.

🔖 **4 other nominations, including Best Model**, International Genetically Engineered Machine (iGEM) 2021.

Notable courses

2023   🔖 **Knowledge Representation on the Web**, Vrije Universiteit
topics: *knowledge graphs, RDF, SPARQL, graph embeddings, semWeb*

2021   🔖 **Logical Aspects of Multi-agent systems**, university of Groningen
topics: *(application of) epistemic logic, action models, belief systems*

🔖 **Machine Learning**, University of Groningen
topics: *probability density functions, PCA, backpropagation/loss functions, feature extraction*

2020   🔖 **Deep Learning**, University of Groningen
topics: *CNNs, RNNs, encoder-decoder systems, GANs, optimizers*

2019   🔖 **Advanced Logic**, University of Groningen
topics: *modal logic, analytical tableaux, FOL*

Extracurricular activities

2024-   🔖 **General chair Computer Science PhD Council**. Vrije Universiteit Amsterdam

2021   🔖 **Team member iGEM Groningen 2021**. University of Groningen.
roles:
- Drylab manager
- Treasurer
- Human Practice team member

2018-2019   🔖 **Lightweight rowing coach**. A.G.S.R. Gyas.

2015-2018   🔖 **Lightweight rower**. A.G.S.R. Gyas.

2015   🔖 **Lightweight rower**. D.R.V. Euros.