

Myrthe Reuver

Researcher, PhD Candidate

Researcher and PhD Candidate (2020- Dec 2024) at the Vrije Universiteit Amsterdam (VU).

My PhD research is on NLP to support diversity and democracy in news recommendation.

My broader research interest is in projects concerning **reliability and quality of online information and debate, societally and scientifically responsible AI, and interdisciplinarity.**

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Research Experience

Visiting Junior Researcher Computational Social Science

March – June 2024

GESIS – Leibniz Institute for the Social Sciences, Cologne (Germany)

- Recipient of a grant for a funded research stay. Topic: instruction-tuned models used in social science.
- Advisor: prof. dr. Gabrielle Lapesa (Data Science Methods group)

PhD candidate NLP for Diversity in News Recommendation

2020 – present

Vrije Universiteit Amsterdam (VU), Amsterdam

- Researching language technology to automatically detect (viewpoint) diversity in news texts.
- Advisors: prof. dr. Antske Fokkens (VU); prof. dr. Suzan Verberne (Leiden University).

Summer Intern Computational Linguistics and AI

June – August 2023

LinkedIn, Dublin (Ireland)

- Summer intern in the “Content AI & Linguist” team: Short research project on content understanding with instruction-tuned models & presenting results within and beyond team.

Research Intern Clinical Natural Language Processing

2019 – 2020

Topicus Healthcare, Deventer

- MSc thesis on classification of complaint category in emergency GP triage texts.
- ResMA thesis on smoking status detection in medical files with weak supervision & transfer learning.

Research Intern Classifying Urban Legends

2019

Meertens Institute, Amsterdam

- Results: [popular science article](#) in *Neerlandistiek*, [a conference presentation](#) at DHBenelux 2019.

BA & MA Honours Academy Projects

2014 – 2018

Radboud Honours Academy, Nijmegen

- MA: 1-year think tank on *Thinking Machines in Healthcare* with MA students from different disciplines.
- BA: 2-year research project on Text Mining in Old English.

Student Research Assistant

2014 – 2017

English Department, Radboud University

- Data annotation and preprocessing for research projects in historical linguistics (English and Dutch).

Education

Master of Science (MSc) Cognitive Science & Artificial Intelligence (bene beritum)

2018 – 2020

Tilburg University

- Thesis: “What Kind of Emergency? Complaint Labels for Dutch Short Clinical Texts”
- Courses (selection): Machine Learning, Deep Learning, Advanced Data Processing with Python

Research MA Linguistics: Language & Speech Technology (cum laude + honours) <i>Radboud University</i>	2017 – 2020
<ul style="list-style-type: none"> ○ Thesis: “Finding the Smoke Signal: Smoking Status Extraction & Classification” ○ Courses (selection): Text & Multimedia Mining, Language & Speech Technology, Advanced Statistics in R 	
BA English Language & Culture, specialization: Linguistics (cum laude + honours) <i>Radboud University</i>	2014 – 2017
Bachelor of Journalism, first-year diploma <i>Christelijke Hogeschool Ede (CHE)</i>	2012 – 2013
<ul style="list-style-type: none"> ○ Radio Presenter at “Radio Almelo” (AAFM) 	
HAVO (higher general secondary education) <i>OPDC 't Nijrees Almelo</i>	2007 – 2012

Summer & Winter Schools.....

- **HPLT & NLPL Winter School on Large-Scale Language Modeling**, *Oslo, Norway*. **2023**
- **European Summer School in Logic, Language, and Information (ESSLI)**, *Galway, Ireland*. **2022**
- **“Research Integrity” Summer Seminar**, *Netherlands Research Integrity Network*. **2021**
- **“Trolls, bots and dictators” Summer School**. *Digital Methods Initiative, Uni of Amsterdam* **2019**
- **“Text Mining for the Humanities” Summer School** *Aarhus University, Denmark*. **2016**

Short Projects.....

- **“Diverse News Recommenders: from concept to implementation” workshop week** **2022**
Invited participant: worked on NLP to measure the (lack of) a shared public sphere in a news recommender.
- **“ICT with Industry” workshop week - project of National Library (KB)** **2019**
Results: a [demo prototype](#), a [report](#), and [an NWO Science vlog](#)

Awards and Grants

Visiting Junior Researcher Grant, Computational Social Science Department <i>Funded stay, GESIS – Leibniz Institute for the Social Sciences (Cologne)</i>	2023
Winning Team (with CLTL PhDs) Shared Task Argument Mining <i>Workshop Argument Mining, COLING 2022</i>	2022
Interdisciplinary grant “Reasons for online (dis)trust in sustainable initiatives” <i>€1.500, IWDS Call, VU Network Institute</i> co-applicant with dr. Ana Lopes (Communication Science)	2022
Winning team Hackathon “Designing a Diverse-aware Recommender System” <i>€3.000, NPO (Dutch Public Broadcaster) and Media Perspectives</i>	2020

Invited Talks

- **Myrthe Reuver**. “*Democratically healthy news recommendation: aligning NLP with society, theory, and evaluation*”. University of Stuttgart. 4 December 2023. [Slides](#)
- **Myrthe Reuver**. “*Cross-topic Stances and How to Find Them (in the News)*”. University of Groningen. 24 February 2023. [Slides](#)
- **Myrthe Reuver**. “*Viewpoint diversity in news recommendation: Theories, Models, and Tasks to support democracy*”. MilaNLP Lab, Bocconi University (Milan). Online. 1 July 2022. [Slides](#)
- **Myrthe Reuver**. “*Hackathons, Shared Tasks, and Papers: Collaboration and Interdisciplinarity with Data on Complex Problems*”. VU Library Data Conversations. Online. 7 April 2021. [Video](#)

Teaching

MA Seminar “Argument Mining”	VU Amsterdam	Sept-Oct 2022
BA + MA “Programming in Python for Text”	VU Amsterdam	Sept- Oct 2021
Teaching Assistant BA “Information Science”	Radboud Uni Nijmegen	2018 – 2020

Supervision.....

- **MA thesis** Alessandra Polimeno: Diversifying News Recommendation Systems by Detecting Fragmentation in News Story Chains - 2022, with prof.dr.Antske Fokkens & Sanne Vrijenhoek

Guest Lectures.....

- “Stance Detection: A Task Definition, Use-Case, and Recent Research.” In: Course “Text Mining”, MSc Computer Science, Leiden University. 10 November 2022 | 1 November 2023 (updated)
- “The Road to my PhD: Full of Tips & Tricks?”. In: ReMA course “Humanities research career preparation”, Vrije Universiteit Amsterdam. 19 November 2021.
- “Finding the Smoke Signal: Smoking Status Extraction & Classification.” In: MA/MSc Course “Text Mining”, Radboud University Nijmegen. 25 November 2020.

Academic Service

Leadership.....

Founder & Editor-in-Chief student journal RU:ts (2018-2020)

Volunteering.....

- **Student Volunteer at Conferences:** CLIN28 (2018), EMNLP 2021, RecSys 2021

Reviewing.....

- **Journals:** Computational Communication Science (2021-), Transactions on Information Systems (2022-), AI Communications (2023-)
- **Conferences:** SIGIR 2021, 2022, 2024. ICA (Comp. Methods track) 2023. ICWSM Data Challenge 2023 (stance detection challenge), LREC-COLING 2024 (track: Opinion & Argument Mining).

Skills

- Natural Language Processing, Machine Learning, Data Analysis
- Cloud computing, bash scripting
- research, collaboration, presenting outcomes

Languages

- **Python:** Huggingface’s Transformers, sklearn & pandas
- **R:** data preprocessing and visualization
- **Dutch**, native / **English**, C2 (near-native)
- **German**, B2 (decent) / **Latin**, A2 (basic) / **Spanish** A1 (beginner)

Media Appearances

- October 2023. *LinkedIn EMEA Women in Tech Podcast*. Talk about my LinkedIn internship experience with my internship mentor. [URL](#)
- May 2022. *Uitsmijter: De Macht van Algoritmen*. Interview in Dutch computer magazine “Computer Idee” about my fight with a credit scoring algorithm, my research, and algorithmic solutions in society. [URL](#)
- 18 January 2022. *Zo werd Myrthe Reuver de dupe van haar data: ‘Ze geloven in eerste instantie het systeem’*. Newspaper Trouw; my experiences with credit scoring algorithm of Dutch National Railways (NS). [URL](#)

Publications

Papers

- **Myrthe Reuver**, Antske Fokkens, and Suzan Verberne. Investigating the Robustness of Modelling Decisions for Few-Shot Cross-Topic Stance Detection: A Preregistered Study. In *Proceedings of LREC-COLING 2024*. Forthcoming.
- Alessandra Polimeno, **Myrthe Reuver**, Sanne Vrijenhoek and Antske Fokkens. (2023). Improving and Evaluating the Detection of Fragmentation in News Recommendations with the Clustering of News Story Chains. In *Proceedings of NORMalize 2023: The First Workshop on the Normative Design and Evaluation of Recommender Systems*, co-located with the ACM Conference on Recommender Systems 2023 (RecSys 2023), Singapore and online. [URL](#).
- Mariken van der Velden, **Myrthe Reuver**, Antske Fokkens, Felicia Loecherbach, Kasper Welbers, Wouter van Atteveldt. 2023. Whose Truth is it Anyway? An Experiment on Annotation Bias in Times of Factual Opinion Polarization. Under Review/Preprint. [URL](#)
- Michiel van der Meer, **Myrthe Reuver**, Urja Khurana, Lea Krause, & Selene Baez Santamaría. (2022). Will It Blend? Mixing Training Paradigms & Prompting for Argument Quality Prediction. In: *Proceedings of the 9th Workshop on Argument Mining*, co-located at EMNLP 2022. [URL](#).
- **Myrthe Reuver**, Suzan Verberne, Morante Roser, and Antske Fokkens. Is stance detection topic-independent and cross-topic generalizable? – A reproduction study. In: *Proceedings of the 8th Workshop on Argument Mining*, co-located at EMNLP 2021, pages 46–56, Punta Cana, Dominican Republic, 2021. Association for Computational Linguistics. [URL](#).
- **Myrthe Reuver**, Nicolas Mattis, Marijn Sax, Suzan Verberne, Nava Tintarev, Natali Helberger, Judith Moeller, Sanne Vrijenhoek, Antske Fokkens, and Wouter van Atteveldt. Are we human, or are we users? The role of natural language processing in human-centric news recommenders that nudge users to diverse content. In: *Proceedings of the 1st Workshop on NLP for Positive Impact*, co-located at ACL-IJCNLP 2021, pages 47–59. Association for Computational Linguistics, 2021. [URL](#).
- **Myrthe Reuver**, Antske Fokkens, and Suzan Verberne. No NLP task should be an island: Multi-disciplinarity for diversity in news recommender systems. In: *Proceedings of the EACL Hackshop on News Media Content Analysis and Automated Report Generation*, pages 45–55. Association for Computational Linguistics, 2021. [URL](#).

Conference and Workshop Presentations

- **Myrthe Reuver**, Alessandra Polimeno, Ana Isabel Lopes. “*Argument Mining to Analyze Reasons for (a Lack of) Trust in Sustainable Initiatives.*” **Talk**, International Communication Association (ICA) 2023.
- **Myrthe Reuver**, Nicolas Mattis, Marijn Sax, Suzan Verberne, Nava Tintarev, Natali Helberger, Judith Moeller, Sanne Vrijenhoek, Antske Fokkens, and Wouter van Atteveldt. “*Are we human, or are we users? The role of natural language processing in human-centric news recommenders that nudge users to diverse content.*” **Poster** at Interdisciplinarity on the Digital Society, Network Institute. [URL](#).
- **Myrthe Reuver**, Suzan Verberne, Roser Morante and Antske Fokkens. 9 July 2021. “*Viewpoints in the news: claim detection for diverse news recommendation.*” **Poster** at Computational Linguistics in the Netherlands (CLIN) 31 (Online), 9 July 2021. [URL](#).
- **Myrthe Reuver**, Iris Hendrickx, Jeroen Kuijpers. “*Smoking Status Detection with a Pre-Trained Transformer and Weak Supervision in Dutch Electronic Patient Files.*” **Talk** at Computational Linguistics in the Netherlands (CLIN) 31 (Online), 9 July 2021. [URL](#).
- **Myrthe Reuver**. “*How Similar are Poodles in the Microwave? Classification of Urban Legend Types.*” Poster at Computational Linguistics in the Netherlands (CLIN) 30, Utrecht, January 2020. [URL](#).
- **Myrthe Reuver**. “*Making the Computer Understand Urban Legend Types (And Making Humans Understand the Computer).*” Moving Humanities Graduate Conference, Nijmegen: 24 October 2019. [URL](#).
- **Myrthe Reuver**. “*Amputation or Accident? Classifying Dutch Urban Legends into Story Types with a Hierarchical Classifier.*” Digital Humanities BeNeLuX, Liège: 13 Sept 2019. [URL](#).
- **Myrthe Reuver**. “*Whose Gender is It? Possessive Pronoun Errors by Portuguese L2 speakers of English.*” 13th TWIST Student Conference in Linguistics, Leiden. 13 April 2019. [URL](#).
- **Myrthe Reuver**. “*First-Person Visibility: Ælfric’s Pronouns in his Prefaces.*”, StuTs Student Linguistics Conference, Nijmegen. 24 November 2017. [URL](#).

Popular Science Publications

- **Myrthe Reuver**. (2022). “Debatten over Abortus om te Leren over Kernenergie”. *DIXIT tijdschrift over taal- en spraaktechnologie*, jaargang 19. Page 16-17. [URL](#)
- **Myrthe Reuver**, Nicolas Mattis. (2020) “Hackers of Science: Lessons from interdisciplinary science in a Hackathon” *Socializing Science*, blog post. [URL](#)
- **Myrthe Reuver**. (2019). “Hoe een computer broodjeaapverhalen leert categoriseren.” *Vertelcultuur*. [URL](#)
- **Myrthe Reuver**. (2019). Vlog for research week “ICT with Industry”. [URL](#)

Reports (Not Peer Reviewed)

- **Myrthe Reuver**, Nicolas Mattis. (2021). “Implementing Evaluation Metrics Based on Theories of Democracy in News Comment Recommendation (Hackathon Report)” In: *Proceedings of the EACL Hackashop on News Media Content Analysis and Automated Report Generation (co-located at EACL 2021, online)*. Association of Computational Linguistics, p. 134–139. [URL](#)
- Anthony Burton, Elena Aversa, Alessandra Facchin, Ivana Emily Škoro, Henri Mütschele, **Myrthe Reuver**, Shenglang Qing. (2019). “Streams of the Deep Web: Rebel Media, YouTube, and the algorithmic shaping of media ecosystems.” *Digital Methods Wiki, UvA Summerschool*. [URL](#)
- Brandsen, A., Kleppe, M., Veldhoen, S., Zijdeman, R., Huurman, H., Vos, H. De, Goes, K., Huang, L., Kim, A., Mesbah, S., **Reuver, M.**, Wang, S., Hendrickx, I. (2019). “Brinkeys.” *KB Lab: The Hague, the Netherlands*. [URL](#)

Book Reviews

- **Myrthe Reuver** (2022) Summary & Book Review of “Linguistics for the Age of AI”. In: *The Linguist List* 33.135. [URL](#)