Myrthe Reuver

Computational Linguist, Researcher, PhD Candidate

Researcher and PhD Candidate (2020-) 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.**

CV last edited: October 12, 2023

🌐 https://myrthereuver.github.io/   ✉ myrthe.reuver[at]vu.nl

 myrthereuver   Twitter: @myrthereuver

Research Experience

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) and 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 on a short research project on content understanding with NLP and generative models, with the intent to improve the LinkedIn experience.

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)   **2017 – 2020**
Radboud University
- 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) **2014 – 2017**
Radboud University

Bachelor of Journalism, first-year diploma **2012 – 2013**
Christelijke Hogeschool Ede (CHE)
Radio Presenter at "Radio Almelo" (AAFM)

HAVO (higher general secondary education) **2007 – 2012**
OPDC 't Nijrees Almelo

Summer & Winter Schools..

- **HPLT & NLPL Winter School on Large-Scale Language Modeling**, *Oslo, Norway.* **2023**
- **European Summer School in Logic, Language, and Information (ESSLLI)**, *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

Winning Team (with CLTL PhDs) Shared Task Argument Mining **2022**
Workshop Argument Mining, COLING 2022

Interdisciplinary grant "Reasons for online (dis)trust in sustainable initiatives" **2022**
€1.500, IWDS Call, VU Network Institute
co-applicant with dr. Ana Lopes (Communication Science)

Winning team Hackathon "Designing a Diverse-aware Recommender System" **2020**
€3.000, NPO (Dutch Public Broadcaster) and Media Perspectives

Invited Talks

- **Myrthe Reuver**. *"Cross-topic Stances and How to Find Them (in the News)"*. Invited Talk, University of Groningen Research Seminar. 24 February 2023.
- **Myrthe Reuver**. *"Viewpoint diversity in news recommendation: Theories, Models, and Tasks to support democracy"*. MilaNLP Lab, Bocconi University (Milan). Online. 1 July 2022. <u>Slides</u>
- **Myrthe Reuver**. *"Hackathons, Shared Tasks, and Papers: Collaboration and Interdisciplinarity with Data on Complex Problems"*. VU Library Data Conversations. Online. 7 April 2021. <u>Video</u>

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.
- "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. ICA (Comp. Methods track) 2023. ICWSM Data Challenge 2023 (on stance detection)

Skills

- Machine Learning, Natural Language Processing
- (Academic) Writing
- Public Speaking and Presenting
- Cloud Computing, Linux, bash scripting

Languages

- **Python** including Huggingface's Transformers, sklearn & pandas, **R**

- **Dutch**, native, **(Academic) English**, C2 (near-native)
- **German**, B2 (decent), **Latin**, B1 (basic)

Media Appearances

- May 2022. *Uitsmijter: De Macht van Algoritmen.* Interview in Dutch computer magazine "Computer Idee" about my fight with a credit scoring algorithm and also my research, and the use of algorithmic solutions in society. URL
- 18 January 2022. *Zo werd Myrthe Reuver de dupe van haar data: 'Ze geloven in eerste instantie het systeem'.* Interview and article in national newspaper Trouw about my experiences with the credit scoring algorithm of the Dutch National Railways (NS). URL

Publications

Peer-Reviewed Papers
- 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.

- van der Meer, M., **Reuver, M.**, Khurana, U., Krause, L., & Santamaría, S. B. (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. <u>URL</u>.
- **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. <u>URL</u>.
- **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 ofnatural 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. <u>URL</u>.
- **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 Hackashop on News Media Content Analysis and Automated Report Generation*, pages 45–55. Association for Computational Linguistics, 2021. <u>URL</u>.

Peer-Reviewed Non-Archival Submissions
- **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. <u>URL</u>.
- **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. <u>URL</u>.
- **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 Netherlandsa (CLIN) 31 (Online), 9 July 2021. <u>URL</u>.
- **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. <u>URL</u>.
- **Myrthe Reuver**. *"Making the Computer Understand Urban Legend Types (And Making Humans Understand the Computer)"*. Moving Humanities Graduate Conference, Nijmegen: 24 October 2019. <u>URL</u>.
- **Myrthe Reuver**. *"Amputation or Accident? Classifying Dutch Urban Legends into Story Types with a Hierarchical Classifier"*. Digital Humanities BeNeLuX, Liège: 13 Sept 2019. <u>URL</u>.
- **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. <u>URL</u>.
- **Myrthe Reuver**. *"First-Person Visibility: Ælfric's Pronouns in his Prefaces."*, StuTs Student Linguistics Conference, Nijmegen. 24 November 2017. <u>URL</u>.

Popular Science
- **Myrthe Reuver**. (2022). "Debatten over Abortus om te Leren over Kernenergie". *DIXIT tijdschrift over taal- en spraaktechnologie*, jaargang 19. Page 16-17. <u>URL</u>
- **Myrthe Reuver**. (2021) "5 Things I Learned During the First Year of my PhD." Blog post. <u>URL</u>
- **Myrthe Reuver**, Nicolas Mattis. (2020) "Hackers of Science: Lessons from interdisciplinary science in a Hackathon" Socializing Science, blog post. <u>URL</u>
- **Myrthe Reuver**. (2019). "Hoe een computer broodjeaapverhalen leert categoriseren." Vertelcultuur Online. <u>URL</u>
- **Myrthe Reuver**. (2019). Vlog for research week "ICT with Industry". <u>URL</u>

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. <u>URL</u>

- 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. <u>URL</u>
- 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. <u>URL</u>

Book Reviews
- **Myrthe Reuver** (2022) Summary & Book Review of "Linguistics for the Age of AI". In: The Linguist List 33.135. <u>URL</u>