

# Myrthe Reuver

Computational Linguist, Data Scientist, PhD Candidate

Researcher and PhD Candidate (started: Sept 2020) at the Free University of Amsterdam (VU), advisors: prof. dr. Antske Fokkens (VU) and dr. Suzan Verberne (Leiden University). My research is on NLP to support democracy in news recommendation, and my broader interest is in **societally and scientifically responsible NLP in complex domains**.

*CV last edited: January 19, 2023*

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## Research Experience

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### PhD candidate NLP for Diversity in News Recommendation 2020 – present

*Free University of Amsterdam (VU), Amsterdam*

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

### Research Intern Clinical Natural Language Processing 2019 – 2020

*Topicus Healthcare, Deventer*

- MSc thesis on classification of complaint category in emergency GP triage (huisartsenpost).
- ResMA thesis on smoking status detection in EMRs 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.

### MA Honours Project: *Thinking Machines in Healthcare* 2017 – 2018

*Radboud Honours Academy & REShape Innovation, Nijmegen*

- 1-year Honours think tank with master students from different disciplines.

### BA Honours Project: *Text Mining in Old English* 2014 – 2016

*Radboud Honours Academy, Nijmegen*

- 2-year research project, included Text Mining summer school in Aarhus, Denmark.

### Student Research Assistant 2014 – 2017

*English Department, Radboud University*

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

## Education

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### Master of Science (MSc) Cognitive Science & Artificial Intelligence (bene meritum) 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.....

- o **European Summer School in Logic, Language, and Information (ESSLLI)**, *Galway, Ireland.* 2022
- o **“Research Integrity” Summer Seminar**, *Netherlands Research Integrity Network.* 2021
- o **“Trolls, bots and dictators” Summer School.** *Digital Methods Initiative, Uni of Amsterdam* 2019
- o **“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

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

**Small interdisciplinary grant “Reasons for online (dis)trust in sustainable initiatives”** 2022  
€1.500, *IWDS Call, VU Network Institute*  
co-applicant with dr. Ana Lopez (Communication Science)

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

## Invited Talks

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- o **Myrthe Reuver.** “Viewpoint diversity in news recommendation: Theories, Models, and Tasks to support democracy”. MilaNLP Lab, Bocconi University (Milan). Online. 1 July 2022. [Slides](#)
- o **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

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**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, co-supervised 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

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Leadership.....

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

Volunteering.....

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

Reviewing.....

- o **Journals:** Computational Communication Science (2021), Transactions on Information Systems (2022), AI Communications (2023)
- o **Conferences:** SIGIR 2021 (subreviewer), SIGIR 2022, ICA (Comp. Methods track) 2022.

## Skills

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

## Languages

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- o **Python** including Huggingface’s Transformers, sklearn & pandas, **R**
- o **Dutch**, mothertongue, (**Academic**) **English**, C2 (near-Native)
- o **German**, B2 (decent), **Latin**, B1 (basic)

## Publications

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- o 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. [URL](#).
- o **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](#).
- o **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](#).
- o **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. [URL](#).

### Peer-Reviewed Non-Archival Submissions

- o **Myrthe Reuver**, Alessandra Polimeno, Ana Isabel Lopes. “Argument Mining to Analyze Reasons for (a Lack of) Trust in Sustainable Initiatives.” **Talk** at 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

- **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**. (2021) "5 Things I Learned During the First Year of my PhD." Blog post. [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 Online. [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., Zijdemann, 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](#)

## 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](#)