



Rochelle Choenni
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PhD Candidate in Natural Language Processing (final year)

My main research interests include multilingual NLP, modular deep learning, and interpretability of large language models.

Education

September 2020 - current, PhD candidate in Natural Language Processing/ Google PhD Fellow

Supervisors: Prof. Ekaterina Shutova and dr. Dan Garrette (Google research). The current focus of my PhD is multilingual NLP and modular deep learning. In the first year, I worked on studying stereotypical information in pretrained language models.

2018 - 2020, Master University of Amsterdam

Master Artificial Intelligence (GPA: 8.3/10) (4.0) - Graduated with Cum Laude, the highest honours distinction at the UvA

2015 - 2018, Bachelor University of Amsterdam

Bachelor Artificial Intelligence (GPA: 8.1/10) (4.0) - Graduated with honours
Bsc AI Honours program

Honours and Awards

2021 - Google PhD Fellowship

Awarded the 2021 Google PhD Fellowship in Natural Language Processing (incl. Information Retrieval). This is a highly competitive grant that was only awarded to 5 other students in 2021. The grant funded my PhD research for 3 years and connected me with my Google mentor, Dan Garrette, who co-supervised my research during those years.

2020 - Amsterdam Data Science (ADS)

Won the ADS Thesis Award for my master thesis on how language relationships are encoded in multilingual models. The project resulted in a CL journal paper.

2019 - TomTom

Part of the first prize winning team at the TomTom summer school challenge

2018 - University of Amsterdam

Obtained the Honours Certificate Bsc AI for the successful completion of 30 extra EC on top of the regular program, including two honours projects and a thesis extension.

2017 - Infosys

Nominated for the InStep Recognition Award (honourable mention)

Experience

2018 - 2020, Research assistant at the Institute for Logic, Language and Computation (ILLC)

After my bachelor thesis, "Evaluating the alignment between LSTMs and brain activation during the process of story reading", Prof. Willem Zuidema offered me a research assistantship to continue working on research in similar directions.

July 2017 - September 2017, Instep Internship at Infosys Ltd., India

Interned with the Independent Validation and Testing Services at Infosys. I worked on developing a test automation framework that uses reinforcement learning, in particular Q-learning, for automated test case generation. For this project, I was nominated for the InStep recognition award as the idea led to an IP solution.

Research

Highlighted Publications

Conference papers:

- Choenni, R., Lauscher, A., & Shutova, E. (2024). The Echoes of Multilinguality: Tracing Cultural Value Shifts during LM Fine-tuning. Under review.
- Choenni, R.*, Rajaei, S.*, Monz, C. & Shutova, E. (2024). Holding a Lens to Evaluation Practices in Multilingual NLP: Can Machine Translation Offer a Scalable Alternative?. Under review.
- Choenni, R., Shutova, E., & Garrette, D. (2024). Examining Modularity in Multilingual LMs via Language-Specialized Subnetworks. In Findings of **NAACL 2024**.
- Choenni, R., Garrette, D., & Shutova, E. (2023). How do languages influence each other? Studying cross-lingual data sharing during LLM fine-tuning. In Proceedings of **EMNLP 2023**.
- Choenni, R., & Shutova, E., van Rooij, R. (2021). Stepmothers are mean and academics are pretentious: What do pretrained language models learn about you? In Proceedings of **EMNLP 2021**.

Journal papers:

- Choenni, R., Garrette, D., & Shutova, E. (2023). Cross-lingual Transfer with Language-specific Subnetworks for Low-resource Dependency Parsing. **Computational Linguistics**, 1-29.
- Choenni, R., & Shutova, E. (2022). Investigating language relationships through the lens of linguistic typology. **Computational Linguistics**, 1-37

For a full list of publications please visit my Google Scholar page.

Talks

- Invited talk Google PAIR XAI group – ‘How do languages influence each other?’ - Online June, 2023.
- Invited talk prof. Anne Lauscher – ‘How do languages influence each other?’ - Universität Hamburg, Germany. August, 2023.
- **Guest lecture** – ‘Compositional semantics and learning sentence representations with neural networks’. Course: Natural Language Processing 1 - University of Amsterdam December, 2022.
- **Guest lecture** – ‘Multilingual modelling’. Course: Advanced Topics of Computational Semantics - University of Amsterdam April, 2022 and 2023.
- Seminar talk at the CRAI-CIS workshop. Aalto University, Finland. June 7, 2022.

Summer schools

- Cambridge summer school on probabilistic machine learning - July 2023.
- Modena summer school on large scale AI - September 2023.
- TomTom AI summer school on geospatial data techniques and the techniques behind autonomous driving vehicles e.g., HD maps and object detection.- August 2019.

Software Development Skills

Programming

- Python
- C
- MATLAB
- Prolog
- C++
- Java
- R

Experience with several DL-frameworks: TensorFlow, PyTorch, Keras.