

# ANDREEA IANA

Mannheim, Germany

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## RESEARCH INTERESTS

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News Recommender Systems, Diversity & Algorithmic Bias, Multilingual & Few-Shot Recommendation

## EDUCATION

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**Ph.D. Computer Science**, Mannheim University 2020 - ongoing

- Topics: Algorithmic Bias & Diversity in Neural News Recommendation
- Supervisors: [Heiko Paulheim](#) (Mannheim University), [Goran Glavas](#) (University of Würzburg)

**M.Sc. Business Informatics**, University of Mannheim 2017 - 2020

- Focus: Machine Learning, NLP, Deep Learning
- Master Thesis: "GraphConfRec: A Graph Neural Network Approach to Generating Conference Recommendations" (Grade 1.0\*)
- Grade: 1.2\* – 'sehr gut' (with honors)

**B.Sc. Liberal Arts and Sciences**, Maastricht University 2013 - 2017

- Focus: Computer Science & Business Administration
- Bachelor Thesis: "Collaborative Course Recommender System for Higher Education Based on Non-Negative Matrix Factorization and Graduating Attributes" (Grade 9.0\*\*)
- Grade: 8.6\*\* (*summa cum laude*, top 1% of class)

\* On a scale of 1.0 to 5.0 with 1.0 being the best possible grade

\* On a scale of 1.0 to 10.0 with 10.0 being the best possible grade

## SELECTED PUBLICATIONS

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- [1] **Iana, Andreea**, Goran Glavas, and Heiko Paulheim. [NewsRecLib: A PyTorch-Lightning Library for Neural News Recommendation](#). In Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP): System Demonstrations. 2023.
- [2] **Iana, Andreea**, Mehwish Alam, Alexander Grote, Katharina Ludwig, Philipp Müller, Christof Weinhardt, and Heiko Paulheim. [NeMig-A Bilingual News Collection and Knowledge Graph about Migration](#). In Proceedings of the 11th Workshop on News Recommendation and Analytics (INRA'23) co-located with RecSys 2023. 2023.
- [3] **Iana, Andreea**, Goran Glavas, and Heiko Paulheim. [Simplifying content-based neural news recommendation: On user modeling and training objectives](#). In Proceedings of the 46th International ACM SIGIR Conference on Research and Development in Information Retrieval, pp. 2384-2388. 2023.
- [4] Ludwig, Katharina, Alexander Grote, **Andreea Iana**, Mehwish Alam, Heiko Paulheim, Harald Sack, Christof Weinhardt, and Philipp Müller. [Divided by the algorithm? The \(limited\) effects of content-and sentiment-based news recommendation on affective, ideological, and perceived polarization](#). Social Science Computer Review (2023): 08944393221149290.
- [5] Breit, Anna, Laura Waltersdorfer, Fajar J. Ekaputra, Marta Sabou, Andreas Ekelhart, **Andreea Iana**, Heiko Paulheim, Jan Portisch, Artem Revenko, Annette Ten Teije, Frank Van Harmelen. [Combining machine learning and semantic web: A systematic mapping study](#). ACM Computing Surveys (2023).
- [6] Alam, Mehwish, **Andreea Iana**, Alexander Grote, Katharina Ludwig, Philipp Müller, and Heiko Paulheim. [Towards analyzing the bias of news recommender systems using sentiment and stance detection](#). In Companion Proceedings of the Web Conference 2022, pp. 448-457. 2022.
- [7] **Iana, Andreea**, Mehwish Alam, and Heiko Paulheim. [A survey on knowledge-aware news recommender systems](#). Semantic Web Preprint (2022): 1-62.
- [8] **Iana, Andreea**, and Heiko Paulheim. [Graphconfrec: A graph neural network-based conference recommender system](#). In 2021 ACM/IEEE Joint Conference on Digital Libraries (JCDL), pp. 90-99. IEEE, 2021.

- [9] **Iana, Andreea**, and Heiko Paulheim. [More is not always better: The negative impact of A-box materialization on RDF2vec knowledge graph embeddings](#). In CEUR Workshop Proceedings, vol. 2699, pp. Paper-5. RWTH Aachen, 2020.
- [10] **Iana, Andreea**, Steffen Jung, Philipp Naeser, Aliaksandr Birukou, Sven Hertling, and Heiko Paulheim. [Building a conference recommender system based on SciGraph and WikiCFP](#). In Semantic Systems. The Power of AI and Knowledge Graphs: 15th International Conference, SEMANTiCS 2019, Karlsruhe, Germany.

A complete list of publications is available from: [Google Scholar](#)

## WORK EXPERIENCE

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**Research Associate**, Data and Web Science Group, University of Mannheim Mannheim, 2020-present

Research on diversity in news recommendation, knowledge-aware recommenders, multilingual information retrieval

- Projects: [ReNewRS](#) (investigation of the influence of algorithmic news selection on shaping public opinion)

**Student Research Assistant**, Data and Web Science Group, University of Mannheim Mannheim, 2018-2020

Research and development work for several projects.

- Projects: analysis of the effect of implicit relations materialization in graphs on the quality of RDF2Vec graph embeddings; entity matching of instances in knowledge graphs with traditional & deep-learning algorithms; implementation of n-triples Cython parser
- Tech: data wrangling in Pandas, RDFLib, gensim, SPARQL, Cython

## TEACHING

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<b>Exercises</b>	Tutorials for Data Mining I and II
<b>Master Theses</b>	Supervision of master thesis on diversified scientific research recommendation
<b>Bachelor Theses</b>	Supervision of bachelor thesis on negative sampling strategies for neural news recommenders
<b>Projects</b>	Supervision of news recommendation library, study-advice chatbot development projects

## PROFESSIONAL SERVICE

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- Reviewer for international journals: Journal of Web Semantics (ISSN: 1873-7749), Information Systems Journal (ISSN:1365-2575)
- Program committee member of international scientific conferences & workshops: ARR, ISWC 2024, ESWC 2024, BeyondFacts'24, PoliticalNLP 2024, DL4KG 2023, BeyondFacts'23, ESWC 2022, DL4KG 2022, PoliticalNLP 2022, ESWC 2021
- Member of professional associations: ACM, ACL

## SKILLS

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<b>Programming</b>	excellent proficiency in Python, Linux CLI, good familiarity with Git, Slurm, Java
<b>ML Frameworks</b>	advanced proficiency in PyTorch(-Lightning), Hydra, WandB, HuggingFace Transformers
<b>Operating Systems</b>	Linux, Microsoft Windows
<b>Languages</b>	Romanian (native), English (native-level, C2 level), German (intermediate proficiency, B1 level)

## OPEN-SOURCE PROJECTS

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[NewsRecLib](#) framework for news recommendation integrating PyTorch(-Lightning), Hydra, WandB