

ANDREEA IANA

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RESEARCH INTERESTS

News Recommender Systems, Diversity & Algorithmic Bias, Multilingual & Knowledge-aware Recommendation

EDUCATION

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

- [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

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

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

PROFESSIONAL SERVICE

- 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: ESWC 2021, ESWC 2022, ESWC 2024, PoliticalNLP 2022, DL4KG 2022, DL4KG 2023, BeyondFacts'23
- Member of professional associations: ACM, ACL

SKILLS

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

OPEN-SOURCE PROJECTS

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