AIDA USMANOVA

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EDUCATION

2023 - Present	PhD in Computer Science (Focus: NLP) at **Leuphana University Lüneburg**	
2020 - 2023	M.Sc. in Artificial Intelligence at **University of Hamburg**	(GPA 3.5/4.0)
2016 - 2020	B.Tech. in Information Systems at **Kazakh British Technical University**	(GPA 3.7/4.0)
Spring 2019	B.Sc. in Computer Science at **Sejong University**	(GPA 4.5/4.5)

SKILLS

Technical Expertise	NLP, ML, LLMs, Knowledge Graphs (KG), Information Extraction, Retrieval Augmented Generation (RAG)
Programming	Python, Java, PostgreSQL, MySQL
Tools	Pytorch, Scikit-Learn, Django, QT, Celery, Neo4J, Github

EXPERIENCE

Leuphana University Lüneburg - Doctoral Researcher 11/23 – Present

- Conducting cutting-edge research in NLP applications for social and environmental impact, developing novel methodologies for misinformation detection and information extraction.
- Currently working on transforming unstructured corporate reports into KGs and developing KG+RAG systems

United Nations Systems Staff College - AI and Learning Analytics Researcher 05/23 – Present

- Optimized machine learning-based course recommendation system for BlueLine e-learning platform
- Built analytics dashboard based on sentiment and semantic analyses, improving participant engagement visibility and course impact tracking

AdaLab - Machine Learning Engineer 11/22 – 08/23

- Fine-tuned state-of-the-art Language Models (GPT-3.5, Transformers)
- Performed prompt optimization and hyperparameter-tuning for Text-to-Video generation
- Conducted data processing and analysis of 100K+ blood samples, that led to 10% boost in accuracy for heparin induced thrombocytopenia risk prediction

Fraunhofer IAPT - Research Assistant 11/21 – 10/23

- Led the development of end-to-end Python and QML-based software for robot-assisted additive manufacturing, ensuring alignment with industry standards, which improved operational efficiency and streamlined into existing production workflows
- Mentored interns, presented findings to business users

PROJECTS

Climate Policy and Corporate Sustainability

- Developed visual analytics framework for company and cross-company analysis, aligning corporate sustainability reports with GRI and performing disclosure coverage assessment.
- Created ClimateCheck dataset to verify climate claims against scientific publications, showcasing dataset via ClimateCheck shared task for abstract retrieval and claim-verification benchmarking.

Responsible AI

- Performed an assessment of energy consumption and carbon emissions for T5 fine-tuning.

SELECTED PUBLICATIONS

- **A. Usmanova**, R. Abdullah, D. Banerjee, M. Leippold, R. Usbeck (2025). "ReportGRI: Automating GRI Alignment and Report Assessment". *CIKM*, 2025.
- R. Ahmad, **A. Usmanova**, G. Rehm (2025). "The ClimateCheck Dataset: Mapping Social Media Claims About Climate Change to Corresponding Scholarly Articles". *ACL*, 2025.
- **A. Usmanova**, R. Usbeck (2024). "Structuring Sustainability Reports for Environmental Standards with LLMs guided by Ontology". *ACL*, 2024.
- D. Amangeldi, **A. Usmanova** and P. Shamoi (2024). "Understanding Environmental Posts: Sentiment and Emotion Analysis of Social Media Data". *IEEE Access*, 2024.
- **A. Usmanova**, J. Huang, D. Banerjee, R. Usbeck (2023). "Reporting and Analysing the Environmental Impact of Language Models on the Example of Commonsense Question Answering with External Knowledge". *Sustainable AI*, 2023.