

Nursulu Sagimbayeva

Saarbrücken, Germany

Open to relocation

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🐙 GitHub

🌐 LinkedIn Profile

📰 Medium

Languages: English (C1) • Russian (native speaker) • German (B2) • Polish (B2) • Kazakh (B1)

EDUCATION

- **M.Sc. in Natural Language Processing, current GPA: 1.4 (best: 1.0)** *October 2022-Spring 2026*
Saarland University Saarbrücken, Germany
 - **Thesis topic:** Encoding brain responses to narratives with task-relevant circuits in LLMs. In progress; supervised by Mariya Toneva and Michael Hahn
- **B.A. in Translation Studies, GPA: 3.75/4.0, German: 1.38** *2018-2022*
Al-Farabi Kazakh National University Almaty, Kazakhstan
 - **Thesis topic:** exploring the effect of features of user-generated content in the Kazakh language on the perceived quality of machine translation in Kazakh-Russian language pair. Grade: 98/100
- **Exchange student** *Oct 21 - Feb 22, Oct 19 - Feb 20*
University of Warsaw Warsaw, Poland

PUBLICATIONS

- **Sagimbayeva, N., Dong, D. (2025).** *Encoding Brain Regions with Sentiment-Relevant Circuits in LLMs*, **CCN 2025 poster**
- **Sagimbayeva, N., Bahçeci, R., Weber, I. (2025).** *Misleading through Inconsistency: A Benchmark for Political Inconsistencies Detection*, **ICWSM Workshop on Misinformation Detection in the Era of LLMs (MisD)**. DOI: 10.36190/2025.29
- Koebe, T., del Villar, Z., Nutakki, B., **Sagimbayeva, N., Weber, I.** *Unveiling local patterns of child pornography consumption in France using Tor*. Published in *Humanities and social sciences communications (Nature Portfolio)* 11, 807 (**2024**). <https://doi.org/10.1057/s41599-024-03343-4> - **Best paper award at NetMob-2023 Challenge**
- Karolina Kuligowska, Agnieszka Repka, **Nursulu Sagimbayeva**, *Text Mining in overcoming disinformation: human cognitive security*, [in:] Paulina Szymczyk, Joanna Kozłowska (eds.), *Education and society - an interdisciplinary analysis of selected issues*, Scientific Publisher TYGIEL, Poland - Lublin 2022 (ISBN: 978-83-67104-44-9)

RELEVANT WORK EXPERIENCE

- **Research Assistant NLP** *April 2026-present*
Language Science and Technology Department, Saarland University Saarbrücken, Germany
 - Evaluating and training Theory-of-Mind (ToM) capabilities in Large Language Models
 - Investigating rule-based approach to ToM with Reinforcement Learning
- **Working Student Clinical NLP (HealthTech)** *May 2025-April 2026*
MPiriQ Science Technologies Munich, Germany (hybrid)
 - Developed pipelines for mapping noisy medical entities to medical coding systems (ICD10, ICD-O-3, LOINC, MedDRA), improving top-1 accuracy from 46.6% to **86%**, top-k from 67.9% to **99%**
 - Extracted and classified medical entities from unstructured patient data (PDFs, tables, doctor letters)
 - Developed end-to-end evaluation pipelines (from collecting the test set to analyzing the results)
- **Research Assistant Societal Computing** *June 2023-December 2024*
Interdisciplinary Institute of Societal Computing, Saarland Informatik Campus Saarbrücken, Germany
 - Initiated a project on automatic inconsistencies detection in politicians' speeches in real time using LLMs; supervised by **Prof. Dr. Ingmar Weber**.
 - Created a **benchmark** on political inconsistencies detection (published at ICWSM MisD workshop-2025)
- **Internship Financial Assets & Solutions Data Analytics** *November 2024-May 2025*
Munich RE Munich, Germany
 - Developed a system for **automatic news monitoring and financial advisory** for alternative asset classes using LLMs and PowerBI visualizations
 - **Automated existing tools** for a structured analysis of alternative investments

ACTIVITIES

- **Studentische Tagung Sprachwissenschaft** *November 2025*
Giving a talk about my thesis topic University of Stuttgart
- **Cognitive Computational Neuroscience (CCN) 2025** *August 2025*
Presenting a poster on encoding brain regions with sentiment-relevant circuits in GPT2 Universiteit van Amsterdam
- **Digital Democracy Days** *October 2024*
Giving a talk on our research (automatic inconsistency detection) University of Saarland
- **Opening of the Interdisciplinary Institute for Societal Computing** *September 2023*
Presenting a poster on our research (semantic shift detection) University of Saarland
- **TaCoS 2023 (international student conference on Computational Linguistics)** *July 2023*
Giving a talk about my project on topic modeling in songs University of Düsseldorf
- **STAL-2023: Slurring Terms Across Languages** *June 2023*
Presenting my essay and venturing new hypotheses on slur reclamations Ecole Normale Supérieure, Paris

PROJECTS

- **Does your chatbot hold grudges against you?** A project where I investigate whether being polite or rude with your AI-assistant can affect its behavior and choices in critical scenarios
Skills: Activation Steering • Linear Probing • Experiment Design • Data Analysis
- **YouNameIt!** A chatbot assisting patients with aphasia in training their memory. Increased accuracy from 39% to 92% on a custom dataset
Skills: Fine-tuning • Prompt-tuning LLMs • Data collection • UX (Streamlit) • Chatbots • User Interaction planning
- **Brain-LLM alignment:** Estimating variance in GPT model explained by different brain regions
Skills: Ridge regression • Bootstrapping • Noise ceiling estimation • Work with fMRI data (reading and listening) • LLMs
- **Brain-Controlled Kitchen:** a Brain-Computer Interface to navigate through the recipe using Imagined Speech
Skills: EEG reading • EEG data processing • UI • User Interaction planning
- **All you need is love?** Exploring the most popular Spotify song topics around the world
Skills: LDA topic modeling • Data processing • Scraping • Working with APIs • Data visualization
- **Mental health in literature:** Diagnosing literary characters with mental disorders according to ICD-10
Skills: Prompt optimization • Data collection • Data visualization • Streamlit
- **GoTogether:** A restaurant recommendation app that considers preferences of 2+ users
Skills: Recommendation systems • User interviewing • Data Collection • Streamlit

AWARDS

- **2023-2024, 2024-2025: Deutschlandstipendium** for high-achieving students (acceptance rate in 2023-2025: 16%)
- **2023:** Best paper award at the NetMob data Challenge 2023.
- **2021-22, 2019-20:** Academic exchange scholarship from the Ministry of Education and Culture (Republic of Kazakhstan)
- **2018-2022:** Winner, finalist, and semi-finalist of 20+ international and local debate tournaments (English and Russian leagues); Chief Adjudicator/judge at local and national tournaments