

Elena Labzina

Research Engineer / Applied ML

AI Safety · Model Behavior · Human–AI Interaction

Zürich, Switzerland
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Industry experience

Google

Zürich, Switzerland

RESEARCH DATA SCIENTIST, SEARCH ADS METRICS

03/2025 – 04/2026

- Designed evaluation methodology for large-scale ranking and targeting changes, including metric design, sampling, cohort definition, and treatment-effect estimation under production constraints.
- Diagnosed measurement-validity problems in launch evaluation and translated findings into corrected, reproducible evaluation protocols.
- Built Python and SQL workflows for model-quality analysis, controlled comparisons, slice-level investigation, and production launch decisions.
- Partnered with engineering and product teams to translate ambiguous system-quality questions into measurable decision frameworks.

Microsoft, Commercial Software Engineering

Zürich, Switzerland

DATA & APPLIED SCIENTIST / MACHINE LEARNING ENGINEER

2020 – 2024

- Contributed to 10+ applied AI and ML projects across media, healthcare, telecom, energy, and government, taking open-ended problems from formulation through production-oriented delivery.
- Built LLM/RAG workflows and fine-tuned models for grounded question answering over heterogeneous enterprise documents, with emphasis on retrieval quality, source attribution, robustness, latency, and cost.
- Built multimodal pipelines combining video transcripts, OCR, documents, metadata, entities, summarization, and embeddings for large-scale retrieval and information extraction.
- Designed evaluation frameworks separating retrieval quality, ranking quality, grounded-answer quality, robustness, production reliability, and user-facing model behavior.
- Improved a production retrieval system for a global media organization, reducing latency by 40% and increasing user engagement by 25%.
- Developed a GenAI-assisted healthcare document pipeline that made the target workflow approximately five times faster and improved extraction accuracy by 50%.

Constructor Academy

Zürich, Switzerland

CONSULTANT AND INSTRUCTOR, GENAI AND APPLIED STATISTICS

2022 – 2025, part-time

- Designed and delivered technical instruction in experimentation, machine learning, deep learning, and generative AI.
- Developed materials connecting statistical reasoning, model evaluation, failure analysis, and production constraints.

Current research

Independent Research

Zürich, Switzerland

LLM SYCOPHANCY AND HUMAN–AI INTERACTION

2026 – present

- Studying how sycophantic model behavior interacts with individual differences between users and shapes beliefs during extended interaction with AI assistants.
- Developing an empirical framework for evaluating heterogeneous effects of model agreeableness, including users' ability to recognize and respond to a mirroring interaction.
- Designing participant recruitment, measurement, and experimental procedures for a crossover-interaction study.
- Examining implications for AI-safety evaluation, post-training objectives, and assistant designs that remain helpful without reinforcing users' existing beliefs.

Technical skills

- **Programming:** Python, SQL, R, C#, C++.
- **ML and AI:** LLM evaluation and fine-tuning, RAG, retrieval, ranking, embeddings, semantic search, multimodal pipelines, NLP, deep learning, and model-behavior analysis.
- **Evaluation and AI safety:** behavioral evaluation, benchmark and test-set design, robustness analysis, grounding, source attribution, failure analysis, and adversarial information dynamics.
- **Research methods:** experimentation, A/B testing, causal inference, sampling, metrics design, treatment-effect estimation, statistical modeling, and reproducible empirical research.
- **Frameworks and infrastructure:** PyTorch, TensorFlow, Hugging Face, scikit-learn, pandas, NumPy, Azure AI Search, Azure Cognitive Services, AWS, Docker, Kubernetes, Git, and GitHub.

Selected publications

WORKING PAPER

- [W1] **E. Labzina**. “Sycophancy as Developmental Stressor: A Constructive-Developmental Reframe of LLM Echo-Chamber Effects.” Manuscript in preparation, 2026.

PEER-REVIEWED PUBLICATIONS

- [J1] J. Barceló and **E. Labzina**. “Do Islamic State’s Deadly Attacks Disengage, Deter, or Mobilize Supporters?” *British Journal of Political Science*, 2020.
- [J2] O. V. Chyzh and **E. Labzina**. “Bankrolling Repression? Modeling Third-Party Influence on Protests and Repression.” *American Journal of Political Science*, 2018.
- [C1] **E. Labzina**. “Inconsistency between Saliency and the Dynamics of Changes: The Information War on Wikipedia.” *AAAI International Conference on Web and Social Media, Wiki Workshop*, 2015-2018.

Academic experience

ETH Zürich, Laboratory of Law, Data, and Economics

Zürich, Switzerland

POSTDOCTORAL RESEARCHER IN DATA SCIENCE

2018 – 2020

- Applied NLP, machine learning, causal inference, and large-scale empirical methods to text, media, and behavioral data.
- Led research from hypothesis development and dataset construction through modeling, validation, interpretation, and publication.
- Co-organized the Zürich chapter of the Summer Institute in Computational Social Science.

Washington University in St. Louis

St. Louis, MO, United States

DOCTORAL RESEARCHER AND ADJUNCT INSTRUCTOR

2012 – 2018

- Built multi-year data-collection infrastructure on AWS and custom analysis pipelines for Twitter, Wikipedia revision histories, and media archives.
- Developed similarity, matching, and anomaly-detection methods for coordinated platform behavior and politically motivated information manipulation.
- Conducted research on ISIS supporter activity, political violence, protest and repression, and adversarial information dynamics.

Central European University, Center for Climate Change and Sustainable Energy Policy

Budapest, Hungary

LEAD DATA ENGINEER

2011 – 2012

- Developed data and modeling workflows for building-sector energy and CO₂ scenario analysis.
- Integrated NASA climate data with GIS-defined geographic zones and built simulation and validation tools for long-term emissions modeling.
- Collaborated with engineers, economists, and policy researchers on data architecture, model assumptions, and analytical outputs.

Education

PhD, Computational Social Science / Political Science

Washington University in St. Louis

2012 – 2018

MS, Statistics, with thesis

Washington University in St. Louis

2016 – 2018

MA, Political Science, with merit

Central European University, Budapest

2010 – 2011

MA, Economics

New Economic School, Moscow

2008 – 2010

BSc, Applied Mathematics and Computer Science, with merit

Lomonosov Moscow State University

2003 – 2007

Selected professional activities

- **Washington University in St. Louis, Department of Political Science** – invited panelist for the *Professionalization Workshop on Jobs Beyond Academia*; discussed industry career paths, relevant skills, applications, and interviewing with graduate students, February 2026.
- **Central European University, Department of Political Science** – invited speaker at the department’s alumni meeting, Budapest, January 2025.
- **Constructor Learning NLP Event, Munich** – *Revolutionizing ML Pipelines for Videos: LLMs and Zero-Shot Learning*, invited talk, 2023.
- **Peer reviewer** for *American Political Science Review*, *Journal of Peace Research*, and *Journal of Conflict Resolution*.
- **Medium and GitHub** – *Creating Your First Search Engine from Scratch*, technical article and accompanying repository, 2022.
- **Summer Institute in Computational Social Science, Zürich** – co-organizer, 2019.