

Benno Krojer

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EDUCATION

MILA – Quebec Artificial Intelligence Institute / McGill University 2021 – 2026

PhD in Computer Science

Montreal, Canada

Courses: Applied Machine Learning, Mathematical Tools for Computer Science, Representation Learning (UdeM),
Reinforcement Learning (all with grade A)

LMU Munich

2017 – 2020

Bachelor of Science in Computational Linguistics, Minor in Computer Science

Munich, Germany

- Grade: 1.1 (equivalent to GPA of 3.9), top of class
- Thesis: Are Pretrained Language Models Symbolic Reasoners Over Knowledge? (supervised by Hinrich Schütze)

Trinity College

Sept 2018 – Apr 2019

Erasmus Exchange for 2 semesters

Dublin, Ireland

INDUSTRY AND RESEARCH EXPERIENCE

Research Intern in JEPA team (full-time)

July 2024 – Feb 2025

Meta (FAIR)

Montreal, Canada

- Analyzing physical world understanding in VideoLLMs (supervision: Mido Assran and Nicolas Ballas)

Research Intern (full-time)

Apr 2021 – Aug 2021

MILA - Quebec Artificial Intelligence Institute

Montreal, Canada

- * Vision-and-Language Research

Research Intern in Machine Translation (full-time)

Dec 2020 – Mar 2021

Lilt GmbH

Berlin, Germany

- * Research on novel attention mechanisms in Transformers to improve coverage in Neural Machine Translation

Machine Learning Intern in Computer Vision for Robots (full-time)

Sept 2020 – Nov 2020

Micropsi Industries

Berlin, Germany

- * Making the computer vision model deployed on robots more robust against difficult light conditions

Research Assistant in Machine Translation (20h/week)

Feb 2020 – Aug 2020

LMU Munich

Munich, Germany

- * Researched adversarial attacks, data augmentation and test set creation for Coreference Resolution in Neural Machine Translation together with Prof. Alexander Fraser and his PhD students (publication listed below)
- * Responsible for code repository and 2-3 sections of the resulting paper

Deep Learning Engineer (20h/week)

May 2019 – Mar 2020

Helsing (named Hellsicht GmbH at the time)

Munich, Germany

- * Cell image segmentation pipeline with U-Net & ResNet models for client from the pharmaceutical industry
- * Predictive Maintenance in mechanical systems
- * Developing a demo for a workshop on automatic visual inspection of surfaces
- * Clustering of point clouds into relevant buildings or landscape objects

Computational Linguistics Programmer (10h/week)

Feb 2017 – Jul 2018

Intrafind GmbH

Munich, Germany

- * Improving language identification system used in Intrafind's Search Engine
- * Identifying bugs in complex source code and analyzing corpora

PUBLICATIONS

- [Learning Action and Reasoning-Centric Image Editing from Videos and Simulation](#)
Benno Krojer, Dheeraj Vattikonda, Luis Lara, Varun Jampani, Eva Portelance, Christopher Pal, Siva Reddy.
Conference on Neural Information Processing Systems (NeurIPS Spotlight, Dataset & Benchmarks Track), 2024. (Spotlight)
- [Are Diffusion Models Vision-And-Language Reasoners?](#)
Benno Krojer, Elinor Poole-Dayana, Vikram Voleti, Christopher Pal, Siva Reddy.
Conference on Neural Information Processing Systems (NeurIPS), 2023.
- [Image Retrieval from Contextual Descriptions](#)
Benno Krojer, Vaibhav Adlakha, Vibhav Vineet, Yash Goyal, Edoardo Ponti, Siva Reddy.
Association for Computational Linguistics (ACL), 2022.
- [Are Pretrained Language Models Symbolic Reasoners Over Knowledge?](#)
Nora Kassner*, **Benno Krojer***, Hinrich Schütze.
Conference on Computational Natural Language Learning (CoNLL), 2020.
- [ContraCAT: Contrastive Coreference Analytical Templates for Machine Translation](#)
Dario Stojanovski*, **Benno Krojer***, Denis Peskov*, Alexander Fraser.
Conference on Computational Linguistics (COLING), 2020.
- [Improving Automatic VQA Evaluation Using Large Language Models](#)
Oscar Manas, **Benno Krojer**, Aishwarya Agrawal.
AAAI Conference on Artificial Intelligence, 2023
- [Pragmatic Inference with a CLIP Listener for Contrastive Captioning](#)
Jiefu Ou, **Benno Krojer**, Daniel Fried.
Findings of the Association for Computational Linguistics (ACL) 2023

*equal contribution

SCHOLARSHIPS

- Vanier Scholarship (50.000 CAD/year, 2023 - 2026)
- Nick Cercone Scholarship (6.000 CAD, 2022)
- FRQNT Scholarship (declined, 2023)

ACADEMIC/COMMUNITY SERVICE AND TALKS

- Organizer of the Mila-wide speaker series [Tea Talks](#) (Jan 2025 – ongoing)
- Reviewing: CogSci 2025, CVPR 2025, NeurIPS 2024, NeurIPS DB Track 2024, COLM (Ethics Reviewer) 2024, ACL 2024, COLING 2024, [Multilingual Multimodal Learning \(MML\) Workshop at ACL 2022](#)
- Talks: FAIR Reading Group (September 2024), AI2 Mosaic (February 2024), ACL Oral Presentation (May 2022), Samsung/Mila/NYU Workshop (April 2022), Copenhagen NLP Reading Group (April 2022)
- Workshop Organization: NewInML at NeurIPS 2023 (lead organizer of speaker selection)
- Supervision/Mentoring: Nooshin Soheililangroodi (undergraduate independent study in CS, McGill, 2024), Michelle Yang (undergraduate independent study in Linguistics, McGill, 2021)

- Teaching: TA for COMP 451 (Fundamentals of Machine Learning)
- Reading Group organization (at Mila): founded the Language Grounding Reading Group (2021-2025)
- Volunteering for [AI Helps Ukraine](#) (Nov 2023)
- McGill BRIDGE Mentoring Program (Winter 2024): CS grad students are matched with underrepresented undergrads to help them get started in research
- Reviewer of applications for Mila PhD/MSc cohort (Dec 2023)

SKILLS

Natural Languages: German (native), English (near native), French (B1)

Programming Languages: Python, Java, C++, Haskell, Prolog, Javascript/HTML

Technologies: PyTorch, NumPy, Tensorflow, slurm, pandas bash, git, OpenCV, Matplotlib, LaTeX, slurm, NLTK, JavaFX, Docker

EXTRA-CURRICULAR

Founder of *PhilosophiaMunich*, a Student Philosophy Society

Aug. 2019 – Jul. 2021

TUM/LMU Munich

Munich, Germany

- * Organization of regular paper discussions, speaker events, dedicated reading groups and socials
- * Creating Social Media Content & recruiting new members

Competitive Ultimate Frisbee

2011 – Today

- * Highlights: U24 Worlds and U17 Euros for German National Team, 8th best club in Europe 2018
- * Coaching: currently Mixed senior team in Montreal, Munich Juniors Team for several years
- * Supervised children at sports camp for two years during their school holidays, as full-time paid voluntary work

Member of Student's Committee (Fachschaft)

Oct. 2017 – Jun. 2018

Organization of events such as Christmas or Summer party