

Gabor Hollbeck

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Gabor Hollbeck is a physics graduate researcher interested in computational social science, AI4Democracy applications and AI safety research.

Education

M.Sc. Physics , ETH Zürich Focus: SST Phase transitions, Statistical physics & Complex system dynamics	Sept 2022 – Present
B.Sc. Physics , Universität Duisburg-Essen, ranked first in cohort	Sept 2019 – Sept 2022

Experience

Research Pillar Coordinator , Comparative Global Humanities Initiative @MIT with Prof. Wiebke Denecke and Prof. Otto Scharmer	Jan 2025 – Present
• Research on two projects: AI4Democracy & Duolingo for conflict resolution	
Student Researcher , Computational Social Science Group, Prof. Dirk Helbing	Feb 2024 – April 2025
• Complex system optimization via genetic algorithms	
Student Assistant , Institute for Machine Learning @ETH Zürich	Nov 2023 – Apr 2024
Student Researcher , Rahman-spectroscopy on graphen, Prof. Marika Schleberger	Sept 2020 – Mar 2021

Publications

Cannot or Should Not? Automatic Analysis of Refusal Composition in IFT/RLHF Datasets and Refusal Behavior of Black-Box LLMs , NeurIPS (2024) used by Nvidia Research now to audit LLMs	Dec 2024
Congestions and Spectral Transitions in Time-Lagged Correlations of Motorway Traffic . Physica A: Statistical Mechanics and Its Applications, vol. 649, 2024	2024

Coding Projects & Initiatives

Founder, Open Democracy – Open Source Non-profit for AI native Civic Tech tools.	May 2024 – Present
• Recruiting and leading a team of 30+ people. Research supervisor at <u>Agentic Systems Lab</u> at ETH Zurich.	
• Rolling out to 15 countries	
Diplomatica.ai – Duolingo for Conflict resolution, Emotional Intelligence, AI Conversation Simulator that gives feedback on communications skills	2024 – Present
• Recruiting and leading a team of 20+ people	
Co-Founder, The ETH Zürich Alt Protein Project	Nov 2023 – Present
• Think tank and part of Alt Protein Projects, funded by the GFI (Good Food Institute), fostering the transformation of the way we produce food sustainably. Recruiting and leading a team of 10+ people.	
Awardwinning Youtube Content Creator, Polylog (YT Channel on theoretical CS, 0.5-5M views/vid)	2024 – Present

Skills & Interests

Languages: German and Hungarian (native speaker), English (C2), French (B1)

Software/coding: Python (5+y), Julia (1 semester), React (1y), MATLAB (1 semester), Mathematica (2y), Adobe

Interests: Social Entrepreneurship, AI4Good, Complex System Dynamics, Climate Change, Mindfulness

Awards and Scholarships

Winner of Politechathon Berlin 2024 | 1st Place, National Photography Competition of Deutsche Stiftung Denkmalschutz (3000+ participants) | 1st Place in 3Blue1Brown Competition "Summer of Math exposition" | Scholar of the federal merit-based "Deutschland Stipendium"