Gabor Hollbeck

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Gabor is interested in computational social science, AI4Democracy applications and AI safety research.

Education

Research Collaboration, Stanford University	March 2025 – Aug. 2025

- Multiagent Equilibria in Game Theory simulations with Dr. Tobin South and Prof. Alex Pentland, No official affiliation due to recent administratvie visa issues

M.Sc. Physics, ETH Zürich	Sept 2022 – Present

- Focusing on ML, Complex System Dynamics and Computational Social Science

Visiting Undergraduate Student , ETH Zürich	Sept 2021 – Feb 2022
B.Sc. Physics, Universität Duisburg-Essen	Sept 2019 – Sept 2022

- GPA: 1.2/1.0, ranked first in cohort

Experience

AI in Science Lead, Agentic Systems Lab @ETH Zürich	Sept 2025 – Present

- Leading AI projects for advancing scientific discovery and auditing with agentic systems: scienceos.co and rigorous.review

Research Pillar Coordinator, Comparative Global Humanities Initiative @MIT with Prof. Wiebke Denecke and Prof. Otto Scharmer	Jan 2025 – Present

- Research on two of my projects: AI4Democracy & Duolingo for conflict resolution

Student Researcher, Computational Social Science Group, Prof. Dirk Helbing	Feb 2024 – April 2025

- Limits to Growth with feedback loops representing AI and Robotics - Complex system optimization via genetic algorithms

Student Assistant, Institute for Machine Learning @ETH Zürich	Nov 2023 – Apr 2024
Student Assistant, Institute for Science, Technology and Policy @ETH Zürich	Nov 2022 – Nov 2024
Student Researcher, Rahman-spectroscopy on graphen, Prof. Marika Schleberger	Sept 2020 – Mar 2021

Publications & Talks

Talk: **AI tools for collective awareness and deep communication**, At *Korea University, Seoul*, *KU-MIT GHI Forum*	Apr 2025
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
Talk: **AI tools for democracy: The future of voting advice applications**, At *Charls University Prague*, *The Security destilliary*	Oct 2024
Congestions and Spectral Transitions in Time-Lagged Correlations of Motorway Traffic. Physica A: Statistical Mechanics and Its Applications, vol. 649, 2024	Jul 2024

Coding Projects & Initiatives

Founder, Open Democracy – Open Source Non-profit for AI native Civic Tech tools.	May 2024 – Present

- Student Research group on AI driven election tools
- Recruiting and leading a team of 30+ people. Research supervisor at Agentic Systems Lab 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	Jul 2024 – Present

Superconnector – Matchmaking platform for Networks, Events and Conferences. Semantically searchable social network. Initially rolled out at Harvard Business School for mentor-matching.   May 2025 - present

Youtube Content Creator, Polylog (YouTube Channel)   Jul 2024 – Dec. 2024
- Awardwinning educational videos around theoretical computer science, $\sim$ 100K subscribers, 0.5 - 5M views/vid

Co-Founder, The ETH Zürich Alt Protein Project   Nov 2023 – Oct 2024
- Think tank and chapter of the global student movement of Alt Protein Projects, selected and 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.

Board Member & Co-Organizer, ZuMUN 2024   May 2023 – Apr 2024
- Organizing a Model United Nations conference for 100+ attendees
- Recruiting and leading a team of 30+ people

Board Member, ETH Model United Nations   Dec 2022 – Jun 2023

Technical Team Member, TUM Carbon – Carbon Removal Initiative   Nov 2021 – Sept 2022
- Calculation of in-sorbent CO2 diffusion in capillaries
- Approximation of thermodynamic exchange processes
- Pollution Risk assessment

Team Member, TUM Boring – Innovation in Tunneling   Oct 2021 - March 2022
- Student initiative at TU Munich and winner of the Not a Boring Competition by SpaceX & The Boring Company

Skills & Interests

Languages: German and Hungarian (native speaker), English (C1), French (B1)

Software/coding: Python (5+ years), Ruby (couple months), Julia (1 semester), React (couple months), MATLAB (1 semester), Mathematica (2 years), Origin (2 years), MS Office, Adobe, Blender

Interests:
Social Entrepreneurship, AI4Good, Complex System Dynamics, Climate Change (Systemic, intersectional justice and prevention), Ideas of Effective Altruism (critique best described here), Mindfulness, Rationality, Political theory, Epistemology, Basketball

Awards and Scholarships

Winner of Politechathon Berlin 2024	Dec 2024
1st Place in 3Blue1Brown Competition "Summer of Math exposition"	Sept 2024
Project Grant for young Students with sustainability focused initiatives - U-Change program	Apr 2024 - Dec 2024
Winner of Best Delegate Award at Model UN HSG	Dec 2022
Scholar of Promos/DUE Mobil, Scholarship for study-related stays abroad	Sept 2021 – Feb 2022
Scholar of the federal merit-based "Deutschland Stipendium"	Sept 2021 – Sept 2022
1st Place, National Photography Competition of Deutsche Stiftung Denkmalschutz (3000+ participants)	Oct 2016

Freelance Videography

Video Producer, German Zero e.V. (carbon neutrality initiative) - produced cinema advertisement, **My second website** , 6+ years professional experience, 30+ profession/private projects