# Elliot Gestrin

*Curriculum Vitae (November 2026)*

## Personal Details


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| GitHub | github.com/ElliotGestrin |
| Google Scholar | citations: **87** (scholar.google.com/citations?user=227ReEYAAAAJ) |


## Summary


PhD student combining large language models with symbolic AI planning and reasoning: LLM agents using symbolic tools, LLM-driven planning from natural language, LLM-evolved search heuristics, transformers for planning and explainable planning.


## Education

since 01/2024 **PhD Student in Computer Science** at Linköping University, Sweden
*Robust Planning with Large Language Models*
Expected graduation: 12/2027

2019–2024 **Bachelor and Master of Science in Applied Physics and Electrical Engineering** with master's specialization in **Data-Driven Intelligent Systems**
Linköping University, Sweden
GPA 4.75/5

## Publications

Authors in publication order; * marks equal contribution.

### Conference Papers

2026 *Symmetry-Aware Transformer Training for Automated Planning*.
Markus Fritzsche*, **Elliot Gestrin*** and Jendrik Seipp.
AAAI 2026 (CORE A*).

2026 *Planner Museum: Evaluating Classical Planners Over Time*.
Arnaud Lequen, Oliver Joergensen, Windy Phung, **Elliot Gestrin**, Damien Van Meerbeeck, Markus Fritzsche, Dominik Drexler and Jendrik Seipp.
ICAPS 2026 (CORE A*).

### Workshop Papers

2026 *LLM-Evolved Domain-Independent Heuristics for Symbolic AI Planning*.
**Elliot Gestrin** and Jendrik Seipp.
ICAPS 2026 Workshop on Planning in the Era of Large Language Models (LM4Plan).

2026 *Automatically Uncovering Intended Domain Constraints in Automated Planning*.
**Elliot Gestrin**, Johannes Fichte and Jendrik Seipp.
ICAPS 2026 Workshop on Knowledge Engineering for Planning & Scheduling (KEPS).

2026 *Predicting Macro-Learning Performance Using Structural Regularity*.
Anton Gustafsson, Jendrik Seipp and **Elliot Gestrin**.
ICAPS 2026 Workshop on Knowledge Engineering for Planning & Scheduling (KEPS).

2025 *Explainable Planning via Counterfactual Task Analysis for the Beluga Challenge and Beyond*.
**Elliot Gestrin**, Gustaf Söderholm, Paul Höft, Mauricio Salerno, Jendrik Seipp and Daniel Gnad.
ICAPS 2025 Workshop on Human-Aware and Explainable Planning (HAXP).

2024 *NL2Plan: Robust LLM-Driven Planning from Minimal Text Descriptions*.
**Elliot Gestrin**, Marco Kuhlmann and Jendrik Seipp.
ICAPS 2024 Workshop on Human-Aware and Explainable Planning (HAXP).

### Manuscripts Under Review

AAAI 2027 *Automatically Uncovering Intended Domain Constraints in Automated Planning*.
Extended version of the KEPS 2026 workshop paper.

ICLR 2027 *LLM-Evolved Domain-Independent Heuristics for Symbolic AI Planning*.
Extended version of the LM4Plan 2026 workshop paper.

## Honors and Awards

2026 **Best ICAPS DC Presentation Award**
For the presentation *LLMs and Planning* at the ICAPS 2026 Doctoral Consortium.

2025 **IDA Best Thesis Award, Nominee**
One of 8 nominees for the best computer science Master's thesis at Linköping University.

2024 **Qualcomm Stipend for Outstanding Engineering Students**
Awarded to 9 outstanding engineering students at Linköping University.

## Competitions

2026 **Winner, Google DeepMind & Lovable Stockholm AI Hackathon**
An international one-day AI hackathon in Stockholm with 90 participants, co-hosted by Google DeepMind and Lovable, organized by {Tech: Europe}.

2025 **Winner, Explainability Challenge, Beluga™ Competition**
Explainability competition organized by Airbus and the TUPLES project. Won with Gustaf Söderholm, Paul Höft, Mauricio Salerno, Daniel Gnad and Jendrik Seipp.

2025 **Winner, Nordic Software Hackathon**
A multi-week hackathon with the final decision made by 1200 C-level executives.

2023 **Winner, Technical Excellence, SICK Solution Hackathon**
An international 3-day hackathon with 107 qualified on-site participants.

2022 **National Championship, Scania Innovathon**
Multi-stage sustainability innovation competition; reached the national finals.

## Research Visits

Q1 2027 **Research visit** to Christian Muise (Queen's U.) and Sheila McIlraith (U. of Toronto).

## Talks and Presentations

11/2026 *Language Models Using Symbolic Tools: Push Performance, Increase Trust and Slash Costs*
Upcoming invited talk at the Software Technology Exchange Workshop (STEW 2026).

06/2026 *Symbolic Planning and Evolved Heuristics*
Invited talk at the NCRA group, University College Dublin, Ireland.

05/2026 *LLMs and Planning*
ICAPS 2026 Doctoral Consortium presentation. Received the Best Presentation Award.

## Academic Service

### Organizing

LM4Plan Planning in the Era of Large Language Models, Workshop Series

- ICAPS 2026, co-organizer
- ICML 2026, co-organizer

Shadow PC Shadow Program Committee member for ICAPS 2026

### Reviewing

AAAI 2026–27, AAMAS 2027, ICAPS 2025–26, IJCAI 2025–26, KR 2026, NeurIPS 2025–26

## Commissions of Trust

since 2026 Organizer of the RoboCup Junior European Championship 2028.

since 2026 Mentor to the national principal organizer of RoboCup Junior Sweden.

2022, 2024–26 National principal organizer of RoboCup Junior Sweden (youth robotics).

2021, 2023 Logistics coordinator for the Swedish youth championship of robotics, RoboCup Junior.

since 2026 Treasurer of Dataföreningen, Sweden's oldest computer association (two-year term).

2025 Co-opted board member of Dataföreningen, Sweden's oldest computer association.

2023–2024 Vice-chairman of the AI and Robotics association, FIA, at Linköping University.

2020–2023 Chairman of the AI and Robotics association, FIA, at Linköping University.

## Grants

2026 Blanceflor Scholarship, sole recipient
40,000 SEK ≈ 3,700 EUR
Foundation Blanceflor Boncompagni-Ludovisi, née Bildt. Research visit to Christian Muise (Queen's U.) and Sheila McIlraith (U. of Toronto), 2027.

2025 Skolverket (Agency for Education), sole PI
286,700 SEK ≈ 26,800 EUR
International travel and accommodation for the Swedish youth robotics championship.

## Teaching

2026 **Foundations of AI and Machine Learning** (TDDE56, BSc) at Linköping University
Role: Project Mentor, guiding two student groups through their applied AI projects

2026 **Logic** (TDDD72 and TDDD88, BSc) at Linköping University
Role: Teaching Assistant; Students: 61 (TDDD72) and 91 (TDDD88)
Also contributed to the course redesign, writing exam and lesson problems.

2020–2022 **Linear Algebra** (BSc, Swedish) at Linköping University
Role: Teaching Assistant; Students: ∼40

2021 **Introduction to Mathematics** (BSc, Swedish) at Linköping University
Role: Mentor; Students: ∼40

## Advising and Supervision

### Master's Students

since 11/2025 Anton Gustafsson
*Ongoing project on informed filtering for lifted pattern databases (PDBs). Earlier project on estimating macro-learning performance resulted in the ICAPS 2026 KEPS workshop paper* Predicting Macro-Learning Performance Using Structural Regularity.

### Master Theses

01/2025–06/2025 David Albrekt and Hanna Häger (external thesis with Toyota Material Handling)
*Dynamic Error Handling in Automated Forklifts Using Large Language Models*

## University Service

since 2026 Contributor to *AI Academy* at Linköping University, via institutional service time. Helping design and deliver AI workshops for industry and the public sector, including *Leadership Labs*, a workshop series on vibe coding for leaders. Also developing training material and lab setups, and liaising with the Machine Reasoning Lab.

since 01/2026 Founder and organizer of the *PhD Shadowing* program at the Department of Computer and Information Science (IDA), Linköping University. Master's students shadow a PhD student for a normal working day to see what doing a PhD actually involves, aiming to spark interest in PhD studies and internal thesis projects.

since 01/2025 Organizer of the internal master's thesis inclusivity program at IDA.

## Public Outreach

11/2026 *Innovathon 2026*: AI city-development event, co-organized via Lingon AI.

10/2026 *AI in Everyday Life: Examples and Risks*: talk for SeniorNet Linköping.

03/2026 *AI for Teachers*: teacher training at Lagmanskolan, Linköping.

since 2024 *AI, what is it really?*: lecture series at Linköping high schools.

2025 *Foundation Models Beyond LLMs*: lecture for IT professionals.

2025 *Models and Mycelium*: AI-art exhibition at Naturcentrum, Linköping.

2023 *Data Leaks and Neural Networks*: lecture for IT professionals.

## Industry Experience

since 2026 **Co-founder** of Lingon AI, Sweden
No-code, browser-based platform for building 3D prototypes of urban ideas with AI.

since 2025 **Co-founder** of Strimova, Sweden
Startup in process automation and documentation, affiliated with the LEAD incubator.

since 11/2021 **Freelance AI Consultant**, Sweden
AI consulting for startups and scale-ups. Mostly custom AI MVPs and proofs of concept, plus strategic advice on AI adoption. Selected projects:
• Designing AI agents for social infrastructure (Samla AI, since 2026)
• Desktop robot for elderly care (Dyno Robotics, EU project, 2025)
• AI-driven knowledge sharing in agriculture (Linköping Science Park, 2025)

2023–2024 **Researcher** at National Forensic Centre (Swedish Police), Sweden
Research on the state of the art in reconstructing training data from trained neural networks, and what this means for the privacy of models trained on sensitive data.

2022 **System Developer** at Drakryggen, Sweden
Built a reinforcement learning framework and card-game environment in PyTorch.

2021 **Programming Coach** at Skill, Sweden
Teacher at a summer camp for youths aged 7–17 in various programming languages.

2020–2021 **3D Printing Technician** at Linköping University, Sweden
Operated and maintained 3D printers for research and education.

## Technical Skills

Programming Python, C++, LaTeX, Typst

ML PyTorch, Hugging Face Transformers, NumPy, LLM APIs and agent frameworks

Planning PDDL, Fast Downward, heuristic search, neuro-symbolic systems

Tools Linux, Git, Docker, Slurm/HPC clusters