

Derck Prinzhorn

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Education

- University of Amsterdam** 2023 - 2026
Master of Science in Artificial Intelligence Amsterdam
- **Relevant Coursework:** Machine Learning, Deep Learning, Reinforcement Learning, Computer Vision, Natural Language Processing, Information Retrieval, Interpretability & Explainability.
- University of Amsterdam** 2020 - 2023
Bachelor of Science in Artificial Intelligence (Grade: 8.2/10) Amsterdam
- **Relevant Coursework:** Programming, Linear Algebra, Calculus, Bayesian Statistics, Machine Learning, Reinforcement Learning, Computer Vision, Natural Language Processing, Information Retrieval.
- Het Amsterdams Lyceum** 2014 - 2020
VWO Gymnasium Amsterdam

Research experience

- Supervised Program for Alignment Research** Jun 2024 – present
Research Intern Remote
- Working on AI Control research.
 - Supervised by experienced alignment researcher from Redwood Research
- Deltares** Mar 2024 – Jun 2024
Research Intern Utrecht
- Researched conformal prediction methods for discharge forecasting.
 - This involved implementing appropriate methods, evaluating their performance and explaining them to meteorologists.
- University of Amsterdam** Jan 2024 – May 2024
Research Intern Amsterdam
- Researched uncertainty quantification methods. Specifically, we introduced a novel perspective on conformal prediction for time series.
 - Submitted findings to COPA, a workshop with a focus on conformal prediction.

Industry experience

- Politie Nederland** Apr 2023 – present
Machine Learning Architect Utrecht
- Designing centralized MLOps architecture, consisting of MLOps processes, tooling and workflows, including CI/CD pipelines, and AI governance frameworks.
 - Introducing AI Safety initiatives through risk modelling and safety engineering.
- Dutch Nao Team** Sep 2022 – Jan 2024
Machine Learning Engineer Amsterdam
- Developed AI models for pose classification, object detection, sound detection and reinforcement learning.
 - Managed team activities, project backlogs and led scrum teams, resulting in 5x more members and a novel robot framework built from scratch in Rust.
- LeerLevels** Oct 2021 – Jan 2023
Software Engineer – Team Lead Amsterdam
- Developed grading algorithms, search engines, and recommendation systems.
 - Supervised an app development project, resulting in an MVP mobile app.

Academic work

Workshop Paper <i>Conformal time series decomposition with component-wise exchangeability</i> <ul style="list-style-type: none">Accepted to the 13th Symposium on Conformal and Probabilistic Prediction with Applications (COPA 2024) and published in the Proceedings of Machine Learning Research (PMLR 2024).	June 2024
Journal Paper <i>Reproducibility study of FairAC</i> <ul style="list-style-type: none">Published in the Transactions on Machine Learning Research (TMLR 2024).	June 2024
Bachelor Thesis <i>Benchmarking conformal prediction methods for time series regression</i>	June 2023

Honors and awards

AmsterdamAI Thesis Award Winner <ul style="list-style-type: none">Awarded for outstanding bachelor thesis on conformal prediction for time series.	
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Teaching

Information Visualization <i>Teaching assistant for BSc course at UvA</i>	Spring 2023
Cognitive Modeling (Reinforcement Learning) <i>Teaching assistant for BSc course at UvA</i>	Spring 2023
Datastructures and Algorithms <i>Teaching assistant for BSc course at UvA</i>	Winter 2022
Machine Learning Project <i>Teaching assistant for BSc course at UvA</i>	Winter 2022
Introduction to Machine Learning <i>Teaching assistant for BSc course at UvA</i>	Fall 2022
Bayesian Statistics for Machine Learning <i>Teaching assistant for BSc course at UvA</i>	Fall 2022

Projects

AI Safety Hackathon, 2nd place <i>LLMs, SAEs, TransformerLens</i> <ul style="list-style-type: none">Developed a novel method to inspect, reverse engineering and steer Large Language Models.Our team achieved second place out of 8 teams.	November 2023
Robotics Hackathon ERF2022, 2nd place <i>Python, ROS2, Robotics</i> <ul style="list-style-type: none">Created software for Lely Juno robot, achieving second place among robotics master students.	June 2022
Machine Learning Project <i>Python, Random Forests</i> <ul style="list-style-type: none">Conducted ML project to identify drivers of real estate valuation growth for KR&A.	January 2022

Volunteering and organizing

AI Safety Amsterdam (AISA) <i>Core team</i>	Sep 2023 – present Amsterdam
Google Developer Student Clubs UvA <i>Core team</i>	Dec 2023 – Jun 2024 Amsterdam
Foundation Dutch Nao Team <i>Vice chair</i> <ul style="list-style-type: none">Refined board processes, managed recruitment, and developed partnerships	Jul 2023 – Mar 2024 Amsterdam
Programme Committee AI UvA <i>Member</i> <ul style="list-style-type: none">Contributed to AI program discussions, course evaluations, and resolving student-teacher issues	Sep 2021 – Apr 2023 Amsterdam

Stichting Hoormij

Jun 2021 – May 2023

*Board member**Houten*

- Advisor to the board of Hoormij.NVVS
- Focused on tinnitus and innovation strategies within the organization.

Tinnitus Jong Netwerk, Stichting Hoormij

Jan 2021 – Apr 2022

*Secretary**Houten*

- Established a committee for young people with tinnitus.

Stichting Studiezalen

Feb 2020 – Oct 2021

*Mentor**Amsterdam*

- Mentored high school students in coaching and homework tutoring.

School's cool

Oct 2020 – Aug 2021

*Mentor**Amsterdam*

- Mentored primary school students during their transition to high school, while managing language and arithmetic backlogs and home situation.

Skills

Languages: Dutch (Native), English (Professional)**Programming Languages:** Advanced - Python; Basic - Rust, C++, HTML, CSS, JavaScript**Data Science and Machine Learning:** Scientific Libraries - Numpy, Pandas, Scipy, Matplotlib, Astropy; ML Frameworks - Scikit-learn, PyTorch, TensorFlow, OpenCV, Jax, Statsforecast**Databases:** SQL - PostgreSQL, MySQL, SQLite; NoSQL - JSON, Firebase (Cloud Firestore); Graph - Neo4j**Development and API Tools:** API Development - Flask, Fastapi, Postman; Development Tools - Jupyter, GitHub, Git, Bash shell, Docker, Kubernetes**MLOps:** Experiment Tracking - MLflow, Weights & Biases, Neptune; Orchestration - Metaflow, Flyte, Kubeflow, Airflow, Argo Workflows