Neel Nanda's MATS 7.0 scholar with ICML 2024 mechanistic interpretability workshop spotlight publication looking for an AI safety researcher position.

Education **!**



Clément DUMAS

- 2024-2025: Computer Science research Master MVA (Mathematics, Vision, Learning) at ENS Paris-Saclay. The ENS is a selective institution that trains teachers and researchers
- 2023-2024: Computer Science research Master MPRI at ENS Paris-Saclay.
- 2022-2023: Double Bachelor's degree in Computer Science at ENS Paris-Saclay
- 2020-2022: Completed "classes préparatoires", an intensive two-year programme in the sciences with 12 hours of math per week, preparing for the competitive entrance exams to the ENS

Research Experience 🔬



- →: lead to a first-author publication
 - Since January 2025 : MATS 7.0 scholar in Neel Nanda's stream working on model diffing using methods like crosscoders
 - Summer 2024 *: 5-month research internship at EPFL with Robert West and Chris Wendler. Our work, Separating Tongue from Thought: Activation Patching Reveals Language-Agnostic Concept Representations in Transformers, was spotlight at ICML 2024 mechanistic interpretability workshop
 - July 2024: Attended the Human-aligned Al Summer School
 - January 2024: Explored the emergence of XOR features in Large Language Models and the RAX hypothesis developed by Sam Marks. See our fork of the repository
 - October 2023 May 2024: Supervised Program for Alignment Research (SPAR) under the supervision of Walter Laurito. We tried to apply Contrast-Consistent Search to Reinforcement Learning models
 - Summer 2023: Two months research internship with Jobst Heitzig on Aspiration-Based Q-Learning. See our LessWrong post and our Stable Baselines 3 fork
 - 2022-2023: Participated in "Séminaire Turing", an Al alignment reading group at ENS Paris-Saclay
 - December 2022: Participated in the AI testing hackathon organized by Apart Research. Our submission about Trojans in transformers was ranked #4
 - November 2022: Participated in the Interpretability hackathon organized by Apart Research
 - November 2022: Participated in the ML4G, a one-week French AI alignment camp organized by Effisciences
 - October 2022: Participated in the AI alignment Hackathon organized by EffiSciences about the out of distribution and underspecification problems
 - 2021-2022: Implemented a Monte-Carlo tree search for the travelling salesman problem which expand this paper to include local search in playouts

Programming Projects 🛠

- Developed mechanistic interpretability tooling: nnterp, a wrapper around NNsight focused on LLMs and tinydashboard, a tool to visualize activations of sparse dictionaries
- Early adopter of the mechanistic interpretability library NNsight, actively engaging with the community to answer questions and improve it
- Developed a CodinGame multiplayer game
- Ranked in top percentiles in CodinGame multiplayer bot programming contests: top 0.5%, 3% and 7% in 2021-2022
- Proficient in OCaml, Python, Java, PyTorch, and NNsight, with working knowledge of Rust, CUDA, C++ and others

Referees

Neel Nanda

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Robert West

Associate Professor and Head of the Data Science Lab Ecole Polytechnique Fédérale de Lausanne robert.west[at-symbol]epfl.ch dlab.epfl.ch/people/west

Chris Wendler

Postdoctoral Researcher at the Data Science Lab Ecole Polytechnique Fédérale de Lausanne chris.wendler[at-symbol]epfl.ch wendlerc.github.io

Jobst Heitzig

Leader, FutureLab on Game Theory and Networks of Interacting Agents Potsdam Institute for Climate Impact Research jobst.heitzig[at-symbol]pik-potsdam.de www.pik-potsdam.de/members/heitzig

Walter Laurito

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