# **Thomas Winninger**

M2 mathematics student at Télécom SudParis - ENS Paris-Saclay.

I'm looking for an intership starting April 2026, on LLM alignement, AI security, or more generally fundamental AI that would lead to a PhD.

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## **Education**

- 2025 2026 Master MVA, ENS Paris-Saclay
  Topology, optimal transport, reinforcement learning, training and deploying large-scale models, LLM, graph neural networks, learning for protein science, convex optimization.
- 2022 2026 Engineering Degree, Télécom SudParis
   Telecommunications, cyber security, cloud, information theory, probability, optimization, graph theory, graph neural networks, signal processing.

# **Experience**

- Jul Sep 2025 Research internship in LLM security NICT
   Research on the security and jailbreak interpretability of Large Reasoning Models (LRMs).
- Mar May 2025 **Research internship in AI explanability INRIA**Verified robust explanation for language models.
- Jul Dec 2024 **Research internship in AI security Thales**Implementations and improvements of state-of-the-art attacks on LLMs.
- 2022 2024 **Teaching and infrastructure HackademINT**Teaching (cloud and AI security), cloud management (Kubernetes), creation of challenges (AI & quantum physics), and organization of 404CTF 2023 & 2024 (largest cyber security competition in France).

#### Miscellaneous

- · Spoken languages: French (native), English (TOEIC), Japanese (JLPT 4)
- · Programming languages: Python, OCaml, Typst, TypeScript, Lua, Rust, C, Bash, Lean

## **Papers**

- · Scaling Hybrid Constrined Zonotopes with optimisation Winninger T., Urban C., Wei G., Jun 25. Paper
- · Using Mechanistic Interpretability to Craft Adversarial Attacks against Large Language Models Winninger T., Addad B., Kapusta K., Mar 25. <a href="Marxiv">ArXiv</a> / <a href="Webpage">Webpage</a>

#### **Selected Talks**

- · Mechanistic interpretability for LLM attack and defense, École Polytechnique, CeSIA, Apr 25. Slides
- Introduction to AI security and reverse engineering, Télécom SudParis, HackademINT, Apr 25. Slides / Webpage
- · Model Poisoning, Station F, CeSIA, Jun 24. Slides