

Eric Rodríguez Boidi

Experience

2023–present **Research Engineer**, *Harmonic*

As one of the earliest employees in Harmonic, I've had a hand in most aspects of the company, leading to our AI system Aristotle performing at a gold medal-level at the 2025 International Mathematical Olympiad.

- end-to-end responsible for autoformalization 90%+ of all our RL seed data pre-IMO
- research and productionization for our next-generation agent, which has solved many open math problems
- architecting a high-performance LLM request router handling millions of requests per day
- training some of our 200B+ parameter models

Oct 2023 - Feb 2024: *contractor*; Feb 2024 - present: *Research Engineer*

Skills

Stack Lean 4, Python, k8s, GCP, PyTorch, Wandb, SLURM, Docker, BigQuery, PostgreSQL, SQLite, Protobuf, FastAPI, C#, $\text{\LaTeX}$

Languages English (Native), Spanish (Native), Italian (Intermediate)

Open Source `mathlib`, (and `mathlib3`), `flt-regular`, `lean3`, `Alectryon`

Research

- [1] The Harmonic Team. "Aristotle: IMO-level Automated Theorem Proving". In: (2025). arXiv: 2510.01346 [cs.AI]. URL: <https://arxiv.org/abs/2510.01346>.
- [2] Alex Best, Christopher Birkbeck, Riccardo Brasca, Eric Rodriguez Boidi, Ruben van De Velde, and Andrew Yang. "A complete formalization of Fermat's Last Theorem for regular primes in Lean". In: (2025). arXiv: 2410.01466 [cs.FL]. URL: <https://arxiv.org/abs/2410.01466>.

Education

2022–2023 **M.Sc. in Mathematics**, *King's College London*

- Thesis: *Modular Forms and Quaternion Algebras*

2018–2021 **B.Sc. in Computer Science and Mathematics**, *Durham University*

- *Natural Sciences Award for Outstanding Achievement*
- Led weekly "Algorithms & Data Structures" tutorials for 30 first-year students.
- Thesis: *Hat games & the birthday problem in the Lean 3 theorem prover*.

2018 **Finalist**, *British Informatics Olympiad*

British Citizen – London

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