

THEODORE EHRENBORG

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ehrenborg.dev

WORK

May 2025 – Present Researcher, Beneficial AI Foundation
 Using formal verification to check AI-written software

Feb 2025 – Mar 2025 Technical AI Safety Fellow, Pivotal Research. Mentor: Logan Riggs Smith

Jan 2024 – Jan 2025 Senior Machine Learning Engineer, Myrtle.ai, Cambridge, UK
 For our CAIMAN-ASR product, I
 - stayed current with the speech recognition literature
 - ran experiments to reduce word error rate. See ehrenborg.dev/caiman
 - debugged hardware problems in our on-premise GPU servers
 - interviewed applicants and interacted with potential customers

Sept 2022 – Dec 2023 Junior Machine Learning Engineer, Myrtle.ai

Summer 2022 Machine Learning Intern, Myrtle.ai
 Designed voice activity detector, created dataset, and trained LSTM RNNs.

RESEARCH

March 2025 Discovered symlink exploit in Vast.ai. Awarded bug bounty. See ehrenborg.dev/exploit

Spring 2025 Mechanistic interpretability project at Pivotal Research. See ehrenborg.dev/absorption

GITHUB github.com/TheodoreEhrenborg

Author of sae.ehrenborg.dev

Trains a sparse autoencoder on a 33 million parameter language model (LM)

Author of rl.ehrenborg.dev

Uses reinforcement learning to make a LM generate stories with alliteration

GITHUB WHILE AT MYRTLE.AI github.com/TheoEhrenborg

Contributor to github.com/MyrtleSoftware/caiman-asr

Author of 412 of the 926 merged pull requests, which include:

- Increasing long-audio validation speed by 8x
- Random State Passing, which decreased long-audio word-error-rate by ~40% relative

Reviewed 382 of the other 514 merged pull requests

Released v1.9.0, v1.10.1, and v1.11.0

EDUCATION

2019 – 2022 UNIVERSITY OF CAMBRIDGE, CAMBRIDGE, ENGLAND
 BA Mathematics, Clare College.
 Year 1: Not classed due to pandemic. Year 2: Class I. Year 3: Class II.i.
 I was awarded a Cambridge Trust Scholarship, 10000 GBP per year for 4 years.

2015 – 2019 HENRY CLAY HIGH SCHOOL, LEXINGTON, KY, USA
 SAT score: 1600 out of 1600. ACT score: 36 out of 36. 13 AP courses: all scores 5 out of 5.

COMPUTER EXPERIENCE

Fluent in: Python, PyTorch, Docker, Git, Github Actions, Linux, WordPress, & \LaTeX

Have also used for work: Rust, Nix, Elm, Hydra CI, & Google Compute Engine

Have also used: Lean 4, Julia, Keras, SageMath, Octave, Vast.ai, AWS, & Java

EXTRACURRICULARS

Winter 2019 – Spring 2020 Imperial College Mathematics Competition (a national UK contest)
 I qualified for the second (and final) round and tied for 43rd place.

May 2018 Intel International Science and Engineering Fair (ISEF)
 ISEF is the largest international high school science fair. My project, “Pythagorean Quintuples and Quaternions”, won a 3rd award in math