

# Giulio Starace

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## EXPERIENCE

### OpenAI

Research Engineer

Remote, Anywhere  
Oct 2023 - Present (Ongoing)

- Contractor role, working with Preparedness on evaluating model capabilities.
- Shipped PaperBench [openai.com/index/paperbench/](https://openai.com/index/paperbench/)
- Shipped MLE-bench [openai.com/index/mle-bench/](https://openai.com/index/mle-bench/)
- Shipped SWE-bench Verified [openai.com/index/introducing-swe-bench-verified/](https://openai.com/index/introducing-swe-bench-verified/)
- Other evals shipped at [github.com/openai/evals](https://github.com/openai/evals) feat. Policy Research

### University of Amsterdam - AIRLab

Amsterdam, The Netherlands

Part-time Researcher (Research Assistant)

Apr 2022 - Oct 2022

- Cross-lingual adaptation of large language models (LLMs). Paper and Code: [github.com/thesofakillers/claficle](https://github.com/thesofakillers/claficle)

### ESO - European Southern Observatory

Cerro Paranal, Chile

Research Engineer

Sep 2020 - Sep 2021

- Worked on forecasting of Astronomical Seeing using ML methods.
- Developed of a unified data processing and evaluation pipeline: [pypi.org/project/nowcastlib](https://pypi.org/project/nowcastlib)

Software Engineering Intern

Aug 2019 - Jan 2020

- Unified and personalised the observatory's numerous ticket systems via Microsoft Graph API.

### Video.io - startup

Machine Learning Engineer

Remote, Anywhere  
Feb 2020 - June 2020

- Worked on implementing abstractive summarization of dialogic video.
- Real time speech to text captioning of live video streams
- Revamped full-stack of internal experimental website

### JAXA - Japan Aerospace Exploration Agency

Sagamihara, Japan

Summer Research Intern

Aug 2018 - Oct 2018

- Developed software to estimate visibility of satellite given orbit simulation and thermal constraints.
- Performed multi-parameter regression on ro-vibrational dataset so to characterize starburst galaxy NGC253.

## EDUCATION

### MSc Artificial Intelligence

GPA: 8.2 (Cum Laude) | Amsterdam, The Netherlands

University of Amsterdam

Sep. 2021 - October 2023

- Thesis: Addressing Goal Misgeneralization with Natural Language Interfaces. link: [github.com/thesofakillers/nlgoals](https://github.com/thesofakillers/nlgoals)
- Topics of note: Machine Learning, Deep Learning, Natural Language Processing, Information Retrieval, Reinforcement Learning, Spiking Neural Networks

### ABC Summer School - Computations in Consciousness and Perception

Amsterdam, The Netherlands

University of Amsterdam

June 2022

- 2-week full-time computational neuroscience programme. Developed Project proposal available at [giuliostarace.com/ltm](https://giuliostarace.com/ltm).

### BSc Hons. in Natural Sciences (Physics & Computer Science)

GPA: First Class Honours | Durham, UK

Durham University

Oct. 2016 - July 2019

- Topics of note: Statistics, Vector Calculus, Linear Algebra, Thermodynamics, Quantum & Particle Physics, Databases, Algorithms and Data-structures, Cryptography and Information, Compiler Design, Operating Systems, Computer Vision

## OTHER PROJECTS & PUBLICATIONS

- Starace et al., *Probing LLMs for Joint Encoding of Linguistic Categories*. Findings of EMNLP 2023. arXiv:2310.18696.
- van der Togt et al., *[Re] Badger Seeds: Reproducing the Evaluation of Lexical Methods for Bias Measurement*, 2022. ReScience C 8, #40. 10.5281/zenodo.6574704.
- GPTrueOrFalse** (100 + stars on GitHub) Browser extension showing likelihood that given body of text was generated by OpenAI's GPT-2.
- iclingo** Jupyter Kernel for answer set programming with clingo.
- gigachadify** Put any face onto the Gigachad meme using ML.

## MISCELLANEOUS QUALITIES AND SKILLS

### Languages

English (Fluent), Italian (Fluent), Spanish (Professional)

### Programming Languages

Python, Javascript, SQL, C/C++, HTML/CSS

### Libraries

NumPy, PyTorch, Pandas, HuggingFace, matplotlib, OpenCV, statsmodels, sklearn

### Frameworks and Specs

PyTorch Lightning, WandB, NodeJS (Express), GraphQL, React

### Technologies

Vim, Git, tmux, VSCode, ssh, L<sup>A</sup>T<sub>E</sub>X, FFMPEG, Docker, SLURM