

# Giulio Starace

October 7, 2024 | giulio.starace@gmail.com | github.com/thesofakillers | giuliostarace.com

## EXPERIENCE

### OpenAI

Research Engineer

- Contractor role, working with Preparedness on evaluating model capabilities.
- 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

Remote, Anywhere  
Oct 2023 - Present (Ongoing)

### University of Amsterdam - AIRLab

Part-time Researcher (Research Assistant)

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

Amsterdam, The Netherlands

Apr 2022 - Oct 2022

### ESO - European Southern Observatory

Research Engineer

- 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)

Cerro Paranal, Chile

Sep 2020 - Sep 2021

Software Engineering Intern

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

Aug 2019 - Jan 2020

### Video.io - startup

Machine Learning Engineer

- 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

Remote, Anywhere  
Feb 2020 - June 2020

### JAXA - Japan Aerospace Exploration Agency

Summer Research Intern

- 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.

Sagamihara, Japan

Aug 2018 - Oct 2018

## EDUCATION

### MSc Artificial Intelligence

University of Amsterdam

- 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

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

Sep. 2021 - October 2023

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

University of Amsterdam

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

Amsterdam, The Netherlands

June 2022

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

Durham University

- 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

GPA: First Class Honours | Durham, UK

Oct. 2016 - July 2019

## 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] Badder 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.
- bLANS** Tool for converting sane-LaTeX to ANS-flavoured LaTeX and viceversa.

## 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