Giulio Starace

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EDUCATION

MSc Artificial Intelligence   GPA: 8.29 | Amsterdam, The Netherlands
University of Amsterdam   *Sep. 2021 – Present (ongoing)*
- Thesis: Addressing Goal Misgeneralization with Natural Language Interfaces
- 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.

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

EXPERIENCE

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
- Proposed novel "Post-Hoc Disentanglement via Vessel Adapters (PHoDiVA)" method.

ESO - European Southern Observatory   Cerro Paranal, Chile
Research Engineer   *Sep 2020 – Sep 2021*
- High-resolution forecasting of Astronomical Seeing using Machine Learning methods, using ARIMA and LSTM
- Led the development of a unified data processing and evaluation pipeline: pypi.org/project/nowcastlib

Software Engineering Intern   *Aug 2019 – Jan 2020*
- Designed, developed, tested and deployed a system for displaying information from the observatory's several ticket systems in unified and personalized way via Microsoft Graph API.

Video.io - startup   Remote, Anywhere
Machine Learning Engineer   *Feb 2020 – June 2020*
- Worked on implementing abstractive summarization of dialogic video. (Pandas, Google Cloud Speech API).
- Real time speech to text captioning of live video streams (NodeJS Streams, FFmpeg, HLS/DASH video).
- Revamped full-stack of internal experimental website (NodeJS, GraphQL, PostgreSQL, Docker, NGINX, React).

JAXA - Japan Aerospace Exploration Agency   Sagamihara, Japan
Southwestern University   *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.

PROJECTS & PUBLICATIONS

- Starace et al., *Probing LLMs for Joint Encoding of Linguistic Categories.* Findings of EMNLP 2023. Manuscript and code available on request.
- 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** 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, LaTeX, FFMPEG, Docker, SLURM