Francesco Innocenti

Computational Neuroscience PhD student

Brighton, UK
✉ *F.Innocenti@sussex.ac.uk*
Website: francesco-innocenti

Education

Sept 2021 - 2026 **PhD, Computational Neuroscience**, *University of Sussex*, UK.
- Working thesis: "Advancing the Theory and Practice of Predictive Coding Networks."
- Teaching Assistant on *Fundamentals of Machine Learning*
- Curated an open-access repository of *Neuro-AI research papers* (★ 35)

Sept 2018 - Jun 2021 **B.Sc. Psychology with Cognitive Neuroscience**, *Goldsmiths, University of London.*
- 1st Class Honours
- Thesis: "Modelling the Evolution of Visual Perception with Evolutionary Algorithms" **[Code]**

Experience

Oct 2023 - Apr 2024 **Applied Scientist Intern**, *Amazon*, Barcelona.
- Helped improve and evaluate a short-term forecast of Amazon packages delivered throughout Europe, contributing to an internal conference paper and $MM savings in operational costs.

Oct 2018 - Jun 2021 **Research Assistant**, *ART* LAB.
- Helped develop and validate a neuropsychological test of face recognition (see publications)
- Developed an open-access tutorial for *Visualising Psychological Data in Python*

Jun-Aug 2020 **Research Intern**, *Timing, Awareness, and Suggestion lab.*
- Trained and tested machine learning classifiers to categorise the subjective experiences associated with different psychedelic drugs, based on psychometric data from 55 peer-reviewed studies

Skills

Coding: Python (highly experienced), AWS (basic), SQL (experienced), LaTeX (highly experienced), Julia (conversant), MATLAB (conversant), C# (basic)

Autodiff: JAX, PyTorch, TensorFlow

Web dev.: streamlit (experienced), HTML (basic)

Languages: English (proficient), Italian (native), Spanish (conversant)

Papers

[1] **Innocenti, F.**, Achour, E. M. Singh, R., and Buckley, C. L. (2024). Only Strict Saddles in the Energy Landscape of Predictive Coding Networks? *Advances in Neural Information Processing Systems 38.*

[2] ***Innocenti, F.**, Singh, R., and Buckley, C. L. (2023). Understanding Predictive Coding as an Second-Order Trust-Region Method. *ICML Workshop on Localized Learning (LLW).*

[3] Jansari, A., Green, E., **Innocenti, F.**, Nardi, D., Belanova, E., and Davis, J. P. (2020). The Goldsmiths Unfamiliar Face Memory Test. *OSF Preprints.*

Awards

- *Best Paper Award at the ICML 2023 Workshop on Localized Learning
- British Psychological Society (BPS) Award for highest performance in undergraduate degree