

MARIANA AMENDOEIRA DUARTE

Curriculum Vitae - April 2026

EDUCATION

International Neuroscience Doctoral Program September 2025
Champalimaud Foundation, Lisbon, Portugal

Fully funded doctoral program in Neuroscience.

Master's Degree in Neuroscience 2022 - expected May 2026
Faculty of Medicine, University of Lisbon, Portugal

Elective courses in machine learning and theory of computation. Curricular average grade of 18 (scale 0-20). Defense expected in May 2026.

Integrated Master's Degree in Medicine (MD) 2013 - 2019
NOVA Medical School, Lisbon, Portugal

Final grade of 17 (0-20); Year abroad (Erasmus program) at the Charité Universitätsmedizin Berlin, Germany in 2017-2018.

RESEARCH EXPERIENCE

Doctoral Program Rotation Project March - April 2026
Champalimaud Foundation – Neuropsychiatry Lab Lisbon, Portugal

- Topic: "Mapping LLM Decision-Making in Computational Psychiatry Parameter Space". Self-proposed project focused on computational modeling of large language model behavior in a decision-making task, and comparison with healthy and clinical human populations. **Contributions:** experiment design, prompt engineering, implementation of task evaluation pipeline and user interface, computational modeling of behavior.

Master's Thesis Project September 2023 - September 2025
Champalimaud Foundation – Natural Intelligence Lab Lisbon, Portugal

- Thesis project investigating **cognitive alignment between humans and large language models** in a collaborative memory foraging task. Co-supervised by Daniel McNamee (Champalimaud Foundation) and Bruno Miranda (University of Lisbon). **Contributions:** design and implementation of online experiments involving human–AI and human–human interaction, data collection (through Prolific), data analysis and manuscript writing. Additional exploration of physiological signals as contextual information for closed-loop human-computer interaction.
- Thesis research produced a NeurIPS 2025 Mechanistic Interpretability workshop poster and a manuscript accepted for publication in PNAS.

CLINICAL EXPERIENCE

General Practice, Amadora Health Centre (UCSP Amadora) 2022-2023
Physician in family medicine clinic (12 months) Amadora, Portugal

General Training Internship, West Lisbon Hospital Centre (CHLO) 2020-2021
Physician in General Training (12 months) Lisbon, Portugal

PROFESSIONAL DEVELOPMENT

AI Safety Fundamentals October 2024 - January 2025
BlueDot Impact Online

Online course covering technical AI alignment, including the topics of reinforcement learning from human feedback, scalable oversight and mechanistic interpretability.

Computational Psychiatry Course

Translational Neuromodeling Unit, University of Zurich and ETH Zurich

September 2021

Online

Neuromatch Academy (interactive track)

Computational neuroscience course

July 2021

Online

PUBLICATIONS

Lacoste, E.*, Duarte, M.*, Todd, G., Todd, P.M., McNamee, D.C. *Artificial Intelligence Models Can Track and Collaboratively Modulate Human Memory Search Dynamics*. (in press, 2026) *Proceedings of the National Academy of Sciences* (PNAS). (*Equal contribution)

POSTERS AND TALKS

Duarte, M., Lacoste, E., Todd, P., McNamee, D.C. *Artificial intelligence models can track and collaboratively modulate human memory search dynamics*. 7th International Conference on the Mathematics of Neuroscience and AI (neuroMONSTER), June 2026, Rome, Italy. (Upcoming spotlight talk)

Mainen, Z.F., Stein Brito, C., Duarte, M., Sandru, A.R., Neelabh, K., Gingeira, M.L., Zuo, M., Decaix, P., Assaf, D.Y., Xu, A.Z. *Thinking About Thinking With Machines That Think*. Post-AGI Science and Society Workshop at ICLR 2026, April 2026, Rio de Janeiro, Brazil. (Workshop paper)

Lacoste, E., Duarte, M., Todd, P., McNamee, D.C. *Emerging Human-like Strategies for Semantic Memory Foraging in Large Language Models*. Mechanistic Interpretability Workshop at NeurIPS 2025, December 2025. (Workshop paper)

Duarte, M., Lacoste, E., Todd, P.M., McNamee, D. *Facilitating Cognitive Synergy Between Humans and AI*. Responsible AI Forum, November 2024, Porto, Portugal. (Oral presentation, winner of the SPARK award)

SKILLS

Programming	Python (proficient), C#, JavaScript
Machine Learning	Scikit-learn, PyTorch
Natural Language Processing	Large language models, embedding models (BERT, FastText)
Mechanistic Interpretability	Linear probes, steering vectors, logit lens
Behavioral Studies	Experiment design, online data collection (Prolific, Empirica)
Data Analysis	Statistical analysis, computational modeling, signal processing
Languages	Portuguese (native), English (C2), German (B2)

AWARDS AND STIPENDS

November 2024 SPARK award for best MSc research in responsible AI, Center for Responsible AI

ART INSTALLATIONS

Chatsubo: an immersive mixed-reality installation

Metamersion: Healing Algorithms exhibition

May 2024

Lisbon, Portugal

Development of a mixed reality installation involving **real-time multi-agent interactions** between human visitors and large language models, including speech-to-text and text-to-speech functionality and immersive 3D scenes built in Unity.