Ilaria Gavetti
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Education

- **University of Amsterdam** — Amsterdam, NL
  Master of Science in Brain and Cognitive Sciences; current GPA: 8.4/10 — *Aug. 2023 – present*
  - **Relevant classes**: Computational Cognitive Neuroscience; Foundations of Neural and Cognitive Modelling; Neuroimaging: Bold MRI; Advanced Neural and Cognitive Modelling (planned); Cognitive Data Science: from Genes to Behaviour (planned).
- **Tilburg University** — Tilburg, NL
  Bachelor of Science in Cognitive Science and Artificial Intelligence; GPA: 8.2/10 — *Aug. 2020 – July. 2023*
  - **Relevant classes**: Advanced Python Programming; Machine Learning; Deep Learning; Computational Linguistics; Cognitive Neuroscience.

Experience

- **Donders Institute for Brain, Cognition and Behaviour** — Nijmegen, NL
  Research Intern @ Computational Neuroscience Lab (Prof. Bernhard Englitz) — *Jan 2024 - Jul 2024*
  - **Interpretable AI**: In my position, I utilize interpretable AI methodologies to investigate how PyTorch-based neural networks extract features to forecast behavioral patterns within the zebrafish brain. In this role, I am refining my Python skills, especially in Pytorch as well as familiarizing myself with functional data collected via light-sheet microscopy.
- **Tilburg University** — Tilburg, NL
  Teaching Assistant @ Department of Cognitive Science and AI (Prof. Marijn van Wingerden) — *Jan 2023 - May 2023*
  - **Classroom planning**: I assisted students and graded practical assignments for the labs of the second year BSc CSAI course "Cognitive Neuroscience". The labs spanned the topics: EEG data analysis, Decision Making, Executive Functions, Emotions and Social Cognition, Memory and Brain-Computer Interfaces.
- **Tilburg University** — Tilburg, NL
  Research Assistant @ Department of Cognitive Science and AI (Prof. Marijn van Wingerden) — *Sep 2022 - Jan 2023*
  - **Educational material creation**: Contributed to re-design the practical materials from the second year CSAI course "Cognitive Neuroscience".
- **Tilburg University** — Tilburg, NL
  Research Intern @ Department of Cognitive Science and AI (Prof. Marijn van Wingerden) — *Jan 2022 - Jun 2022*
  - **EEG data (pre-)processing**: Developed an EEG (pre)-processing pipeline to clean-up raw EEG data and conducted event-related potential, time-frequency, as well as connectivity analyses on it, employing the MNE-Python toolbox. In this role, I learned how to analyze and manipulate data in the form of NumPy arrays.

Projects

- **Exploring recurrency in bio-inspired convolutional neural networks**: In a recent class project for my master's program, my team and I tested a pre-trained VGG16 convolutional neural network with recurrent connections on an ambiguos image. Our objective was to observe and analyze its behavior over time while attempting to classify the image.
- **Machine learning for brain cancer diagnosis**: In a class project for my bachelor's program, my team and I investigated various machine learning models and their effectiveness in classifying brain cancer based on RNA-sequenced data from controls as well as glioblastoma and lung cancer metastasis patients.

Programming Skills

- **Languages**: Python, R, Netlogo, Prolog **Technologies**: Conda, AWS, GitHub

Languages

Italian: native **English**: fully proficient **Spanish**: intermediate **German**: elementary