

# Melina Müller

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PhD student in Computational Neuroscience with research experience in Machine Learning, computational modeling, and human neural signal processing. Wants to apply multidisciplinary scientific skills to develop neural interfaces.

## Education

Sep 2024 – Present	<b>PhD AI in Biomedical Innovation</b> • University of Edinburgh <ul style="list-style-type: none"><li>Thesis: Data-Driven Model-Based Closed-Loop Control of Neural Dynamics to Restore Function in Human Neurological Conditions; <i>Supervisors:</i> Dr Nina Kudryashova, Prof Matthias Hennig</li></ul>
Sep 2023 – Aug 2024	<b>MSc Cognitive Science</b> • University of Edinburgh <ul style="list-style-type: none"><li>Grade: Distinction (3.98 / 4.0 GPA)</li><li>Thesis: Using Tensor Decomposition to Understand the Emergence of Recurrent Neural Networks' Dynamics; <i>Supervisor:</i> Dr Angus Chadwick</li></ul>
Sep 2019 – Jun 2023	<b>BSc (Hons.) Mathematics and Psychology</b> • University of Stirling <ul style="list-style-type: none"><li>Grade: First Class with Honours (3.97 / 4.0 GPA)</li><li>Thesis: Application of Tensor Decomposition for Neural Signal Processing; <i>Supervisor:</i> Dr Wen-shin Lee</li></ul>

## Publications

Nov 2024	<b>Mueller, Melina</b> ; et al.(2024). Automated face recognition assists with low-prevalence face identity mismatches but can bias users. <i>British Journal of Psychology</i> . <a href="https://doi.org/10.1111/bjop.12745">https://doi.org/10.1111/bjop.12745</a>
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## Research Experience

May 2023 – Jul 2023	<b>EPS New Graduate Research Project</b> • University of Stirling <ul style="list-style-type: none"><li>Conducted a first-authored, self-proposed research project on human-computer interaction during AI-assisted face recognition</li><li>Designed the decision-making study to reflect real-world application</li><li>Developed novel quantification metrics to assess the behavioural data</li></ul>
Jul 2023 – Aug 2023	<b>Research Assistant in Health Psychology</b> • University of Stirling <ul style="list-style-type: none"><li>Studied how individuals' illness perceptions impact their mood and health</li><li>Performed statistical analyses on cross-sectional, quantitative study results</li></ul>
Jan 2022 – May 2023	<b>Volunteer Research Assistant in Cognitive Science</b> • University of Stirling <ul style="list-style-type: none"><li>Developed a Virtual-Reality environment for studying EEG activity during joint action using the Unity game engine and C#</li><li>Presented and demonstrated the work in a Master's course</li></ul>

## Other Work Experience

Feb 2025 – Jun 2025	<b>Python Course Developer</b> • University of Edinburgh <ul style="list-style-type: none"><li>Created a Jupyter book teaching Python for Bioinformatics to beginners</li><li>Collaborated in a team of five to design and implement the course</li><li>Explained complex programming concepts through relevant use-cases</li></ul>
Sep 2022 – Apr 2023	<b>Volunteer Mentor</b> • University of Stirling <ul style="list-style-type: none"><li>Held mentoring seminars for first-year psychology students</li><li>Expanded leadership abilities by helping students form a community</li><li>Increased teaching and research-related skills through instructing practical topics such as academic writing and time management</li></ul>
Aug 2017 – Sep 2017	<b>AI-Tech Start-Up Intern</b> • Parkbob GmbH <ul style="list-style-type: none"><li>Facilitated data collection and annotation for training computer vision models</li><li>Executed general administrative and team coordination tasks</li><li>Gained insight into how AI research is translated to commercially viable technology</li></ul>
Jan 2016 – Present	<b>Tutoring</b> <ul style="list-style-type: none"><li>Tutor periodically at university and privately in Mathematics &amp; Statistics</li><li>Improved students' grades and understanding by listening to problems and finding creative pedagogical approaches</li><li>Curated teaching materials and plans tailored to students' individual needs</li></ul>

## Awards & Certificates

Awards	<ul style="list-style-type: none"><li>The Phyllis Lee Prize for the best Combined Honours Psychology student</li><li>Prize for outstanding performance in year 2 mathematics module</li></ul>
Certificates	<ul style="list-style-type: none"><li>First Aid for Mental Health - Level 2 • First Aid Awards</li><li>Good Clinical Practice (GCP) Certificate • NIHR</li><li>Research, GDPR, and confidentiality • UKRI</li></ul>

## Skills & Interests

Software Experience	<ul style="list-style-type: none"><li>Python (incl. NumPy, Scipy, Matplotlib)</li><li>ML and DL tools (incl. Pytorch, Scikit-learn)</li><li>Neural data analysis (incl. MEAs, fMRI)</li><li>MATLAB</li></ul>	<ul style="list-style-type: none"><li>Jupyter</li><li>Git</li><li>Unity</li><li>Java</li></ul>
Languages	<ul style="list-style-type: none"><li>German (native language)</li></ul>	<ul style="list-style-type: none"><li>English (proficient)</li></ul>
Interests	<ul style="list-style-type: none"><li>Judo: promotes self-discipline and control; Was secretary for Stirling's Judo Club</li></ul>	<ul style="list-style-type: none"><li>Fibre arts: sewing, knitting, crochet</li></ul>