Ben Sanati

PhD Student, University of Edinburgh

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Research Interests. My interests lie in the theoretical foundations of machine learning, with a focus on developing principled approaches to learning under uncertainty. My work explores continual learning, bounded rationality, epistemology, and subjective perspectives on probability theory.

▬▬▬ Education

2024–2028   **Ph.D in Machine Learning Systems**, University of Edinburgh.
Advisors: David Abel, Amos Storkey.

2019–2023   **MEng Electronic Engineering with AI**, University of Southampton.
First Class Honours
Advisors: Jonathon Hare, Geoff V. Merrett
     Thesis: *Improving Inference Efficiency with Dynamic DNNs*
     Thesis: *Detecting, Mapping, and Verifying Signage*

▬▬▬ Professional Experience

03/24–07/24   **Senior Research Assistant,** *project page*, University of Southampton.
- Sole research associate on a **£25k Innovate UK-funded** industry collaboration.
- Designed and implemented a mobile 3D SLAM system and end-to-end data lake architecture.
- Delivered technical findings and research outcomes to industry stakeholders.

07/23–09/23   **Data Science Intern,** *hackathon*, Cirium, RELX Group.
- Awarded a data science internship following **success in a competitive ML hackathon**.
- Delivered spatio-temporal ML models for large-scale aviation forecasting tasks.

06/22–09/22   **Undergraduate Research Scholar,** *project page*, University of Southampton.
- Awarded a **£5k research scholarship** for academic excellence by a faculty scholarship panel.
- Investigated computationally efficient computer-vision methods for object detection.
- Presented research findings to students and faculty members.

▬▬▬ Awards

2024   EPSRC Machine Learning Systems Scholarship

2022   Undergraduate Research Scholarship

▬▬▬ Publications

Forgetting is Everywhere
Ben Sanati, Thomas L. Lee, Trevor McInroe, Aidan Scannell, Nikolay Malkin, David Abel, Amos Storkey.
In Submission.

▬▬▬ Reviews, Talks and Outreach

Reviews   2025: Finding the Frame, RLC.

Talks   2026: Forgetting is Everywhere. *IML Workshop, University of Edinburgh.*
2025: The fundamental problem of forgetting. *ANC Workshop, University of Edinburgh.*

Further Development   2026: Mathematical Foundations of Probabilistic AI. *ProbAI Hub Winter School, University of Warwick.*