BENJAMIN GUTTERIDGE

beng@robots.ox.ac.uk
bengutteridge.github.io

EDUCATION

University of Oxford (2021-2026): DPhil in Engineering Science (Machine Learning)
— Selected for Centre for Doctoral Training in Autonomous Intelligent Machines and Systems (AIMS CDT), competitive PhD programme in AI and machine learning, funded by UKRI EPSRC.
— Specialising in graph ML—specifically graph rewiring, long-range interactions—and LLMs.

University of Oxford (2017-2021): MEng Engineering Science (Information Engineering)
— **First Class** with ≥82% for Machine Vision, Robotics, Control and Mathematics modules.
— Recipient of Academic Scholarship.

A-Levels (2017): A*A*A*A | GCSEs (2015): 10 A*s, 2As

EXPERIENCE

Deep Learning Summer Intern, *QuantCo,* London   **Jun–Aug 2024, Jul–Sep 2025 [UPCOMING]**
— Internal research project investigating LLM reasoning over long-context documents; prompt engineering and fine-tuning with noisy, multimodal long document (~30+ pages) data.

Visiting Data Scientist, *BCG X,* London   **Mar–Jun 2024**
— Data science/consulting internship. Worked on the 'Pathfinder' flight schedule optimiser for British Airways. Software engineering and data science in Python, working with front-end developers to implement user-controlled constraints and new features in the backend.

Spring into Quant Finance, *G-Research*   **Apr 2023**
— Selected for Spring Insights programme with training in ML, data science and finance.

HumBug Project, *Machine Learning Research Group,* Oxford   **Jun–Aug 2020, Aug–Sep 2021**
— Project using ML and neural networks (NNs) to detect and classify disease-carrying mosquito species from recordings of their 'buzz' taken on inexpensive smartphones in developing countries.
— Developed voice activity detection and removal system for recordings; tested convolutional NNs and Gaussian mixture models, achieving **97%** speech removal with 75% mosquito/noise preservation.
— Developed and tested benchmark models for mosquito audio dataset paper, accepted with oral presentation at NeurIPS 2021. Used Bayesian/residual NNs on time-series data, achieving ROC/PR AUC scores **0.93/0.9** for mosquito event detection and **92.7**/71.6 for multi-species classification.

Intern, *QinetiQ,* Malvern   **Jul–Sep 2018, Jun–Sep 2019**
— Awarded student scholarship; undertook two summer internships in RF, Secure Networks and Comms.
— Worked with team developing Counter-UAV radar system; projects in MATLAB.

ML Project Leader, *Engineers Without Borders Oxford*   **Sep 2020 – Jun 2021**

STEP UP Ambassador, *New College, Oxford Access & Outreach Dept.*   **Nov 2017 – Jun 2020**

SELECTED PUBLICATIONS

Bamberger, J.*, **Gutteridge, B.***, le Roux, S.*, Dong, X., Bronstein, M.: "On Measuring Long-Range Interactions in Graph Neural Networks" (2025). *International Conference on Machine Learning 2025*. (* equal contribution.)

Gutteridge, B., Jackson, M. T., Kukurin, T., Dong, X.: "Judge a Book by Its Cover: Investigating Multi-Modal LLMs for Multi-Page Handwritten Document Transcription" (2024). Under review, NeurIPS 2025. Presented at the *AAAI-25 Workshop on Document Understanding and Intelligence*, 2025.

Gutteridge, B., Dong, X., Bronstein, M., and Di Giovanni, F.: "DRew: Dynamically Rewired Message Passing with Delay" (2023). *International Conference on Machine Learning 2023*. Presented at the Learning on Graphs and Geometry (LoGG) and G-Research ML Seminar series.