BENJAMIN GUTTERIDGE

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

EDUCATION

University of Oxford (2021-2026): DPhil in Engineering Science (Machine Learning)
— Centre for Doctoral Training in Autonomous Intelligent Machines and Systems (AIMS CDT)
— Research areas: broadly graph neural networks and LLMs; specifically graph rewiring, long-range/long-context interactions, graph Transformers, graph foundation models, document processing, OCR.

University of Oxford (2017-2021): MEng Engineering Science (Information Engineering)
— **First Class**; recipient of Academic Scholarship.

EXPERIENCE

Deep Learning Summer Intern, *QuantCo*, London **Jun–Aug 2024, returned Jul–Sep 2025**
— Internal research project investigating LLM reasoning over long-context documents; prompt engineering and fine-tuning with noisy, multimodal long document (~30+ pages) data.
— Invited to return for second internship in 2025; joined DocAI team: document processing for health insurance within AXA Germany, using multi-modal LLMs and fine-tuned traditional language models.
— Implemented Langfuse for MLOps experimentation pipeline, both in AXA Germany DocAI project and at QuantCo internally; set up self-hosted instance with Kubernetes and AWS EKS.

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.

RF Engineering Intern, *QinetiQ*, Malvern **Jul–Sep 2018, returned Jun–Sep 2019**

SELECTED PUBLICATIONS

Gutteridge, B., Bronstein, M., Dong, X.: “Can Graph Foundation Models Generalize Over Architecture?” (2026). To be presented at the *Workshop on Geometry-grounded Representation Learning and Generative Modeling* at the *Fourteenth International Conference on Learning Representations 2026*

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” (2025).
Presented at the *AAAI-25 Workshop on Document Understanding and Intelligence*.

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