

Charles London

DPHIL STUDENT · COMPUTER SCIENCE · UNIVERSITY OF OXFORD

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Education

University of Oxford DPHIL COMPUTER SCIENCE	10/23 - Now
University of Oxford MSc COMPUTER SCIENCE (DISTINCTION)	10/20 - 1/22
University of Cambridge BA COMPUTER SCIENCE W/ PHYSICS (FIRST CLASS)	10/16 - 6/19

Professional Experience

Quantinuum NLP RESEARCH ENGINEER	3/22 - 7/23
Nivaura ANALYST INTERN	7/19 - 9/19
Softwire SOFTWARE DEVELOPER INTERN	7/18 - 9/18

Publications

JOURNAL AND CONFERENCE PAPERS

- London, C.**, Kanade, V., 2025. *Pause Tokens Strictly Increase the Expressivity of Constant-Depth Transformers* NeurIPS.
- Garg, D., VanWeelden, S., ..., **London, C.**, ..., Motwani, S., 2025. *REAL: Benchmarking Autonomous Agents on Deterministic Simulations of Real Websites* NeurIPS Datasets and Benchmarks.
- Nam, Y., Lee, S. H., Dominé, C., Park Y., **London, C.**, Choi, W., Göring, N., Lee, S., 2025. *Solve Layerwise Linear Models First to Understand Neural Dynamical Phenomena*. ICML Position Paper.
- London, C.**, Brown, D., Xu, W., Vatansever, S., Langmead, C.J., Kartsaklis, D., Clark, S. and Meichanetzidis, K., 2024. *Peptide Binding Classification on Quantum Computers*. Springer Quantum Machine Intelligence.

WORKSHOP PAPERS

- Göring N., **London C.**, Erturk, A.H., Mingard, C., Nam Y., Louis A., 2025. *Disentangling Feature Learning from Generalization in Neural Networks* ICML Workshop on High-Dimensional Learning Dynamics

PREPRINTS AND SUBMITTED PAPERS

- Mingard, C., Seier, L., Göring N., Badelita A.-V., **London C.**, Louis A., 2025. *Characterising the Inductive Biases of Neural Networks on Boolean Data* arXiv preprint arXiv:2505.24060.
- Mingard, C., Pointing, J., **London, C.**, Nam, Y., and Louis, A., 2024. *Exploiting the Equivalence between Quantum Neural Networks and Perceptrons*. arXiv preprint arXiv:2407.04371.

CONFERENCE ABSTRACTS

- Ridout, S., Nemenman, I., Louis, A., Mingard, C., Grabarczyk, R., Dingle, K., Valle Pérez, G. and **London, C.**, 2024. *Bounds on Learning with Power-Law Priors*. Bulletin of the American Physical Society.
- Kartsaklis, D., Fan, I., Yeung, R., Hoffmann, T., Kocijan, V., **London, C.**, Pearson, A., Lorenz, R., Toumi, A., de Felice, G. and Meichanetzidis, K., 2022. *Quantum NLP with lambeq*. Applied Category Theory.

Awards & Scholarships

2023 **EPSRC Scholarship**, University of Oxford

Full DPhil funding

2019 **Senior Scholarship**, Trinity College, University of Cambridge

2018 **Senior Scholarship**, Trinity College, University of Cambridge

Teaching Experience

MT 2024 **Computational Learning Theory**, Departmental Tutor

MT 2023 **Computational Learning Theory**, Departmental Tutor

Development

2025 **Economics of transformative AI summer school**, Stanford University

2024 **Machine learning theory summer school**, Princeton University

2022 **Computational neuroscience course**, Neuromatch Academy