Charles London

DPhil Student · Computer Science · University of Oxford

+44 7401 785929 | charles.london@cs.ox.ac.uk | le-big-mac.github.io

Education

University of Oxford *10/23 - Now*
DPhil Computer Science

University of Oxford *10/20 - 1/22*
MSc Computer Science (Distinction)

University of Cambridge *10/16 - 6/19*
BA Computer Science w/ Physics (First Class)

Professional Experience

Quantinuum *3/22 - 7/23*
NLP Research Engineer

Nivaura *7/19 - 9/19*
Analyst Intern

Softwire *7/18 - 9/18*
Software Developer Intern

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