RALPH ABBOUD CV

E ralph@ralphabb.ai **P** +44 7 429925971 **N** Lebanese | New Zealander

Work Experience

Science Associate, Learning Engineering (Full-time). *Schmidt Futures*   2023 - Present
Providing technical and strategic guidance in AI, particularly on selecting and developing
research models (large language models, graph neural networks, etc.).

AI Advisor (Part-time). *The Learning Agency*   2023 - Present
Advising on technical competition design and implementation.

AI Developer (Part-time). *The Learning Agency Lab*   2021 - 2023
Developed and evaluated language models for automated writing feedback.

Visiting Scientist (Part-time), LabGPT project. *Francis Crick Institute*   2023
Worked on biochemistry protocol generation and evaluation with large language models (LLMs)

AI Advisor (Part-time). *Schmidt Futures*   2022 - 2023

Teaching Experience

Tutor, Graph Representation Learning. *Stanford House, Hertford College, Oxford*   2022
Practical Demonstrator, Advanced Topics in Machine Learning. *University of Oxford*   2021 - 2022
Tutor, Probability and Computing. *University of Oxford*   2019

Education

DPhil in Computer Science. *University of Oxford.*   2018 - 2022
Supervisors: Dr. İsmail İlkan Ceylan and Prof. Thomas Lukasiewicz

MSc in Computer Science. *University of Oxford*   2017 - 2018
Coursework Grade: 81.17 / 100, Dissertation Grade: 85 / 100, Distinction.

B.E. in Computer Engineering. *Lebanese American University (LAU)*   2013 - 2017
GPA: 3.99 / 4.00, High Distinction. Minor in Mathematics.

Awards and Honors

Top Reviewer. *NeurIPS (Top 10%), LoG (Top 10 out of 328 reviewers).*   2023
Highlighted Reviewer. *ICML (Top 10%), ICLR (Top 9%).*   2022
G-Research PhD Prize (First Place) in Maths and Data Science. *G-Research*   2022
Global Talent Visa (Exceptional Talent). *UK Home Office, Tech Nation.*   2022
Best Student Paper Runner-up Award. *KR 2020*   2020
Departmental Teaching Award. *Department of Computer Science, Oxford*   2019
Jesus College Graduate Scholarship. *Jesus College, Oxford*   2019 - 2022
Hult Prize London Regional Final Winner. *Hult Prize Foundation*   2019
Alun Hughes Graduate Scholarship. *Jesus College, Oxford*   2018 - 2021
Oxford – DeepMind Graduate Scholarship. *University of Oxford and DeepMind*   2018 - 2021
President's Award and **Computer Engineering Award** (First Place). *LAU*   2017
Best Engineering Capstone Project Poster Award. *LAU*   2017
Merit Scholarship. *LAU*   2013 – 2017

Skills

Programming. Python, Java, JavaScript (D3.js)
Experience with developing graph neural networks (PyTorch, TensorFlow, PyG, DGL), large language models (PyTorch, HuggingFace) and data visualizations (D3.js)

Languages. Fluent in English, Arabic and French.
Advising on technical competition design and implementation.

Music. Baccalaureate in Piano Performance, Distinction. *Lebanese National Conservatory*   2017

Selected Publications

BioPlanner: Automatic Evaluation of LLMs on Protocol Planning in Biology   EMNLP 2023
O. O'Donoghue, A. Shtedritski, J. Ginger, *R. Abboud*, A. Ghareeb, J. Booth, and S. Rodriques

PlanE: Representation Learning over Planar Graphs   NeurIPS 2023
R. Dimitrov, Z. Zhao, *R. Abboud*, and İ. İ. Ceylan

Shortest Path Networks for Graph Property Prediction   LoG 2022
R. Abboud, R. Dimitrov, and İ. İ. Ceylan   (Spotlight)

Approximate Weighted Model Integration on DNF Structures   AIJ, 2022
R. Abboud, İ. İ. Ceylan, and R. Dimitrov

Temporal Knowledge Graph Completion Using Box Embeddings   AAAI 2022
J. Messner, *R. Abboud*, and İ. İ. Ceylan

The Surprising Power of Graph Neural Networks with Random Node Initialization   IJCAI 2021
R. Abboud, İ. İ. Ceylan, M. Grohe, and T. Lukasiewicz

BoxE: A Box Embedding Model for Knowledge Base Completion   NeurIPS 2020
R. Abboud, İ. İ. Ceylan, T. Lukasiewicz, and T. Salvatori   (Spotlight)

On the Approximability of Weighted Model Integration on DNF Structures   KR 2020
R. Abboud, İ. İ. Ceylan, and R. Dimitrov

Learning to Reason: Leveraging Neural Networks for Approximate DNF Counting   AAAI 2020
R. Abboud, İ. İ. Ceylan, and T. Lukasiewicz

Selected Talks

Applying Box Embeddings to Knowledge Bases. *University of California, Los Angeles.*   2021

AI For Reasoning. *Kellogg College, Oxford*   2019

Programs Creating Other Programs: Intro to Program Synthesis. *LAU*   2018

Additional Activities

Project Leader, DeepSaber. *Oxford Artificial Intelligence Society (OxAI) Labs*   2018 – 2019

Student Representative. *Department of Computer Science, Oxford.*   2017 – 2022

Professional Service

Program Committee member. IJCAI (2021- Present), AAAI (2021 - Present), NeurIPS (2021 - Present), ICLR (2022 - Present), ICML (2022 - Present), LoG (2022 - Present) and TMLR (2022)