RALPH ABBOUD CV

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

Experience

Program Scientist. *Learning Engineering Virtual Institute (LEVI)* 2024 - Present
Supporting LEVI's technical operations and providing strategic and technical guidance to program grantees on machine learning / artificial intelligence solution development.

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

Science Associate, Learning Engineering. *Schmidt Futures* 2023 - 2024
Supported LEVI while it was part of the Schmidt Futures Learning Engineering program.

AI Developer (Part-time). *The Learning Agency Lab* 2021 - 2023
Developed and evaluated large language models (LLM) 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), leading to the BioPlanner paper published at EMNLP 2023.

AI Advisor (Part-time). *Schmidt Futures* 2022 - 2023
Supported grantees with the development of machine learning models (LLMs, GNNs).

Education

DPhil in Computer Science. *University of Oxford.* 2018 - 2022
Thesis Title: Learning and Inference over Relational Data
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 Awards at LoG 2023, NeurIPS 2023, ICML 2022 and ICLR 2022. 2022-2023

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 for Weighted model integration paper. *KR 2020* 2020

Jesus College Graduate Scholarship. *Jesus College, Oxford* 2019 - 2022

Alun Hughes Graduate Scholarship. *Jesus College, Oxford* 2018 - 2021

Oxford – DeepMind Graduate Scholarship. *University of Oxford and DeepMind* 2018 - 2021

President's Award, Computer Engineering Award, and Best Capstone Project. *LAU* 2017

Merit Scholarship. *LAU* 2013 – 2017

Skills

Machine Learning. PyTorch, TensorFlow, PyG, DGL, OGB, HuggingFace, OpenAI API, Gensim.

Programming. Python, Java, JavaScript (D3.js, Google Apps Scripts)

Languages. Fluent in English, Arabic and French. Intermediate in Italian.

Music. Baccalaureate in Piano Performance (2017) from the Lebanese National Conservatory

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 (Spotlight)
R. Abboud, R. Dimitrov, and İ. İ. Ceylan

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 (Spotlight)
R. Abboud, İ. İ. Ceylan, T. Lukasiewicz, and T. Salvatori

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

Professional Service

Program Committee member at IJCAI (2021- Present), AAAI (2021 - Present), NeurIPS (2021 - Present), ICLR (2022 - Present), ICML (2022 - Present), LoG (2022 - Present), COLM (2024 – Present) and TMLR (2022).

Teaching

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
Received a department teaching award for my performance in this role.

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