RALPH ABBOUD CV

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N Lebanese | New Zealander

Work Experience

AI Developer and Researcher (Part-time). *The Learning Agency Lab* 2021 - Present
Developing and evaluating language models, proposing a technical framework for automated writing feedback using natural language processing techniques.

Tutor for Visiting Students. Graph Machine Learning. *Hertford College, Oxford* 2022

Course Co-examiner. Advanced Topics in Machine Learning. *University of Oxford* 2022

Practical Demonstrator. Advanced Topics in Machine Learning. *University of Oxford* 2021 - 2022

Class Tutor. Probability and Computing. *University of Oxford* 2019

Education

DPhil in Computer Science. *University of Oxford, United Kingdom.* 2018 - 2022
Thesis: "Learning and Inference over Relational Data".
Supervised by Dr. İsmail İlkan Ceylan and Prof. Thomas Lukasiewicz

MSc in Computer Science. *University of Oxford, United Kingdom* 2017 - 2018
Dissertation Title: "Deep Learning for Program Synthesis".
Coursework Grade: 81.17 / 100, Dissertation Grade: 85 / 100, Distinction

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

Awards and Honors

Highlighted Reviewer (Top 10%). *ICML 2022* 2022

G-Research PhD Prize in Maths and Data Science (First Place). *G-Research* 2022

Outstanding Reviewer (Top 9%). *ICLR 2022* 2022

Global Talent Visa (Exceptional Talent Route). *UK Home Office, Tech Nation* 2022
For demonstrated talent and innovative research in Artificial Intelligence.

Best Student Paper Runner-up Award. *KR 2020* 2020

Departmental Teaching Award. *Oxford Department of Computer Science* 2019
For exceptional teaching standards in the "Probability and Computing" course.

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

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 (TensorFlow, PyTorch, PyTorch Geometric), Java, JavaScript (D3.js)
Experience with developing Graph Neural Network (GNN) models and visualizations.

Languages. Fluent in English, Arabic, and French

Music. Baccalaureate Diploma in Piano Performance, Distinction "Very Good"
Obtained from the Lebanese National Higher Conservatory of Music (LNHCM) in June 2017.

Publications

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

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

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

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

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

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

R. Abboud and J. Tekli. Integration of nonparametric fuzzy classification with an evolutionary developmental framework to perform music sentiment-based analysis and composition — Soft Computing, 2020

R. Abboud and J. Tekli. MUSE Prototype for Music Sentiment Expression — IEEE ICCC 2018

Preprints

R. Abboud, R. Dimitrov, and İ. İ. Ceylan. Shortest Path Networks for Graph Property Prediction — 2022

R. Abboud and İ. İ. Ceylan. Node Classification Meets Link Prediction on Knowledge Graphs. — 2021

Supervision Experience

Co-supervisor. Johannes Messner. *MSc in Computer Science, University of Oxford* — 2021
Dissertation awarded a distinction, and work published at AAAI 2022.

Selected Talks

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

AI For Reasoning. Bletchley Park Week. *Kellogg College, Oxford* — 2019

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

Extracurricular Activities

Project Leader. DeepSaber. *Oxford Artificial Intelligence Society (OxAI) Labs* — 2018 - 2019
Automated level generator for the BeatSaber VR game. The project received an 11,500 USD computational resource grant from Google Research Credits (a first for OxAI).

Student Representative. *Oxford Department of Computer Science.* — 2017 - Present

Founding Vice-President of the LAU Artificial Intelligence (AI) Club. *LAU* — 2016 - 2017

Professional Activities

Program Committee member for IJCAI (2021, 2022), AAAI (2021, 2022, 2023), NeurIPS (2021, 2022), ICLR (2022, 2023), ICML (2022), LoG (2022) and TMLR (2022 – Present).