Benedict Aaron Tjandra

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Education

University of Oxford, St. John's College — Oxford, United Kingdom
Master of Science in Advanced Computer Science — 2023 - 2024
Supervisors: **Prof. Michael Bronstein** (Independent, uncredited project), **Prof. Yarin Gal** (Thesis).

Independent project accepted to *NeurIPS Symmetry and Geometry in Neural Representations 2024 (Oral)*. Thesis accepted to *NeurIPS Safe Generative AI Workshop 2024*.

University of Cambridge, Trinity Hall — Cambridge, United Kingdom
Bachelor of Arts (Hons) in Computer Science, Natural Sciences — 2017 - 2020
Grade: Double First - 86.75%, **Rank**: 1 / 102

Awards: Winifred Georgina Holgate-Pollard Memorial Prize, Lee-Yung Prize for Computer Science, Bateman Scholarship, Trinity Hall Scholarship Award (2018, 2019)

Research Experience

Enhancing the Expressiveness of Temporal Graph Networks via Source-Target Identification
Benedict Aaron Tjandra, Federico Barbero, and Michael Bronstein. Link.

- Accepted to *NeurIPS Symmetry and Geometry of Neural Representations Workshop 2024 (Oral)*.
- Showed that adding source-target identification to Temporal Graph Networks (TGNs) boosts its expressivity, making it outperform all current temporal graph methods for dynamic node affinity prediction.

Fine-Tuning Large Language Models to Appropriately Abstain via Semantic Entropy
Benedict Aaron Tjandra, Muhammed Razzak, Jannik Kossen, and Yarin Gal. Link.

- Accepted to *NeurIPS Safe Generative AI Workshop 2024*.
- Proposed to leverage semantic entropy to fine-tune LLMs to abstain from questions beyond their understanding. Our method achieves competitive results on short and long-form answering settings without requiring ground-truth labels.

On Graph Neural Network Ensembles for Large-Scale Molecular Property Prediction
Edward Elson Kosasih, Joaquin Cabezas, Xavier Sumba, Piotr Bielak, Kamil Tagowski, Kelvin Idanwekhai, Benedict Aaron Tjandra, and Arian Rokkum Jamasb. Link.

- Explored graph neural network ensembles to predict molecular HOMO-LUMO gaps.

Work Experience

XTX Markets — London, United Kingdom
Core Developer — Sep 2021 - Present

- Research on portfolio optimisation methods and FX performance attribution.
- Developed a performant intraday analysis framework from scratch to power historical and real-time Risk calculations, which include high-frequency performance attributions, stress tests, and monitoring systems.
- Maintained and contributed to an in-house distributed microservices architecture that handles the firm's middle-back office, e.g. real-time trade reconciliation, enrichment, capture, surveillance, risk and position calculation systems, DevOps, and real-time pricing systems.

Amazon Web Services — Cambridge, United Kingdom
Software Development Engineer I — Oct 2020 - Aug 2021

- Delivered the launch of S3 Object Lambda – a serverless solution to bring compute closer to storage.
- Maintained and improved the scalability and reliability of highly-distributed, global cloud services serving >100 TPS – S3 Select & S3 Object Lambda.

Goldman Sachs — London, United Kingdom
Summer Technology Analyst — Jul 2020 - Aug 2020

- SecDB Architecture: Optimised trade serialisations using C++ improving runtime performance by 50%.

Utterberry LTD — London, United Kingdom
Software Engineering Intern (AI Development) — Jun 2019 - Sep 2019

- Developed neural-based applications to perform facial recognition and estimate traffic density. Additionally developed an in-house backend infrastructure to deploy and execute jobs and scripts on internal devices.