Noel Loo

Cambridge, Massachusetts, 02139   loo@mit.edu
United States of America   https://yolky.github.io/

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA.   9/2021 - Current
   Ph.D., Computer Science – Supervisors: Prof. Daniela Rus, Dr. Ramin Hasani
   Researching data-efficient deep learning

University of Cambridge, Cambridge, UK.   10/2019 - 6/2020
   M.Eng. Enginering – Supervisors: Prof. Richard E. Turner
   Thesis: Probablistic Inference for Continual Learning
   Awarded 1st Class Honours in thesis (No exams due to COVID)

University of Cambridge, Cambridge, UK.   10/2016 - 6/2019
   B.A. Enginering
   Specialized in Information Engineering (Signal Processing and Communications)
   Awarded 1st Class Honours every year, top 3%, 15%, and 9% in years 1-3

WORK EXPERIENCE

SeroTracker, NLP Engineer   2/2021 - 8/2021
   Researched and implemented NLP models for accelerating evidence-based medicine
   Reduced abstract screening time by 46% using NLP in an ongoing systematic review of COVID-19 seroprevalence studies

University of Cambridge Machine Learning Group, Research Assistant   6/2020 - 12/2020
   Continued research from master's thesis on probabilistic continual learning for neural networks

Jade Owl Ltd., Prediction Algorithm Intern   6/2019 - 9/2019
   Researched and developed strategies for setting price and spread for cryptocurrency market making

Softwire, Software Engineering Intern   6/2017 - 9/2017
   Full-stack web development using Angular 2 with Typescript, using Firebase as the backend

HONORS AND AWARDS

2019 College Prize - Awarded based on part IIA exam performance   6/2019
2018 M.R. Lynch Prize - Awarded based on part IB exam performance   6/2018
2017 M.R. Lynch Prize - Awarded based on part IA exam performance   6/2017
Bronze medal at 2016 International Physics Olympiad   7/2016
2016 Blyth-Cambridge Commonwealth Scholarship - Fully-funded undergraduate scholarship to the University of Cambridge   1/2016

PUBLICATIONS

*Equal Contribution

5 **Noel Loo**, Ramin Hasani, Alexander Amini, Daniela Rus. Efficient Dataset Distillation using Random Feature Approximation, *Conference on Neural Information Processing Systems (**NeurIPS**), 2022*

4 **Noel Loo**, Ramin Hasani, Alexander Amini, Daniela Rus. Evolution of Neural Tangent Kernels under Benign and Adversarial Training, Conference on Neural Information Processing Systems (**NeurIPS**), 2022

3 Sara Perlman-Arrow*, **Noel Loo***, Niklas Bobrovitz, Tingting Yan, Rahul K. Arora. A real-world evaluation of the implementation of NLP technology in abstract screening of a systematic review, *MedRxiv preprint (under review), 2021*

2 **Noel Loo**, Siddharth Swaroop, Richard E. Turner. Generalized Variational Continual Learning, *International Conference on Learning Representations (**ICLR**), 2021*

1 **Noel Loo**, Siddharth Swaroop, Richard E. Turner. Combining Variational Continual Learning with FiLM Layers, ***ICML 2020 workshop on Lifelong learning (Spotlight)***

Patents

Systems and Methods for Efficient Dataset Distillation Using Non-Deterministic Feature Approximation   7/20/2022
Inventors: **Noel Loo**, Ramin Hasani, Alexander Amini, Daniela L. Rus
Provisional No. 63/390,952.

References

Prof. **Daniela Rus**,
Director of Computer Science and Artificial Intelligence Lab (CSAIL),
Massachusetts Institute of Technology (MIT),
Cambridge, MA,
rus@csail.mit.edu

Dr. **Ramin Hasani**,
Research Scientist at Computer Science and Artificial Intelligence Lab (CSAIL),
Massachusetts Institute of Technology (MIT),
Cambridge, MA,
rhasani@mit.edu

Prof. **Richard E. Turner**,
Professor at the University of Cambridge
Cambridge, UK.
ret26@cam.ac.uk