Anya Sims

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Education

PhD in Machine Learning and Modern Statistics – University of Oxford *Sept 2022–2026*

Member of the StatML CDT and OxCSML group
Supervised by Prof. Yee Whye Teh

MEng in Information and Computer Engineering – University of Cambridge *Sept 2018–2022*

BEng First Class with Distinction (ranked 5/288)
Department prize for best 3rd year project
Top ranked final exam performance in Information Engineering Instrumentation and Control area

MEng First Class with Distinction (ranked 8/261)
Received Distinction for dissertation – Supervised by Prof. Phil Woodland

Several Engineering Department and Jesus College Cambridge awards/scholarships each year

Research Experience

PhD Publication Project *2023*

"RAVL: Value Learning for the Edge-of-Reach Problem in Model-Based Offline Reinforcement Learning"
Supervised by Prof. Yee Whye Teh. In collaboration with Cong Lu.
NeurIPS 2023 Agent Learning in Open-Endedness Workshop
Under review at ICML 2024

StatML CDT Mini-Project 1 of 2 *2023*

Investigating plasticity loss and the effects of non-stationary training in deep neural networks
Supervised by Prof. Yee Whye Teh and Chris Gamble (deepmind)

StatML CDT Mini-Project 2 of 2 *2023*

Sphering transformations for stable equivariant normalization in graph neural networks
Supervised by Prof. Yee Whye Teh. In collaboration with Sheheryar Zaidi.

Research Placement – University of Cambridge *Summer 2022 (8 weeks)*

Identifiable variational autoencoders for disentangled causal representation learning
Supervised by Prof. José Miguel Hernández-Lobato. In collaboration with Wenlin Chen.

MEng Dissertation – University of Cambridge *Sept 2021–2022*

End-to-End Speech Recognition using Neural Transducers
Developed more efficient method of graph-based decoding for speech recognition in transducer language models.
Supervised by Prof. Phil Woodland. In collaboration with Tony Zheng.

Industry Experience

Software Engineering Intern - Graphcore *Summer 2021 (10 weeks)*

Worked on a team within the AI Applications Group to implement an extensive codebase demonstrating several image recognition benchmarks on Graphcore's IPU in TensorFlow2. This involved coordinating loading of different stages of the model onto different IPU processing cores to maximize training and inference efficiency.

Machine Learning Mentorship – Featurespace *Summer 2020 (10 weeks)*

Chose to work on abstract reasoning using deep learning (see Kaggle Abstraction and Reasoning Challenge)

Software Engineering Intern – Softwire *Dec 2019*

Website development – Worked primarily on asynchronous API calls component (using Javascript and React)

Data Analytics Intern – Infosys *Summer 2019 (10 weeks)*

Reproduced results from several recent papers on aspect-based sentiment analysis (using Tensorflow and Keras)

Other

Languages: Python, C++, Bash
Frameworks: PyTorch, Tensorflow
Organizational/Teaching roles: Cambridge Windsurfing Secretary (2020-2022)
Volunteer secondary school maths tutor (2018-2019)