

Experience	Qualcomm <i>Nov. 2021-current</i> <i>Senior Engineer</i> Compiler developer for Qualcomm AI Research. Graph and kernel optimizations for VLIW DSP architecture. Compile-time optimizations for machine learning compiler.
	Reservoir Labs <i>Sept. 2021-Nov. 2021</i> <i>Compiler Research Engineer</i> Pre-processing computational graphs upstream of R-Stream, a polyhedral compiler. Reservoir was acquired by Qualcomm in November 2021.
	Cambridge Spark <i>March 2020-March 2021</i> <i>Teaching Fellow</i> Content development and tutoring for topics in machine learning and data science, such as introductions to NumPy, Pandas, SQL, and Bayesian Statistics.
	Morgan Stanley <i>June-August 2016</i> <i>Analyst</i> Ten week internship in the Equity Derivatives team at Morgan Stanley. Worked as a full stack engineer building tools for investigating internal dataflow with Scala.
Education	University of Edinburgh <i>2018-2021</i> <i>Ph.D. Student</i> Resource efficient learning and inference in neural networks under the supervision of Professor Michael O'Boyle and Dr Elliot J. Crowley. Cross-domain research resulting in papers at both machine learning (ICML, ICLR, NeurIPS) and computer systems (ASPLOS, IISWC) conferences. Open source paper replications, tutorials on Gaussian Processes, Python.
	University of Edinburgh <i>2017-2018</i> <i>MSc Computer Science (Distinction)</i> Modules on Machine Learning and Parallel Architectures with a project on accelerating training speeds for neural machine translation models. Thesis on hardware adaptive deep learning for embedded GPUs. Replicated deep learning papers in Python and C++ using PyTorch and Tensorflow.
	University of Birmingham <i>2014-2017</i> <i>BSc Computer Science (1st class)</i> Modules on compiler construction, machine learning, functional programming, statistics.
Technical Skills	Programming Languages: C++, Python, Bash. Other: Deep learning, PyTorch, TVM, optimizing compilers.
Selected Publications	Neural Architecture Search Without Training. J. Mellor, J. Turner, E. Crowley, A. Storkey. <i>International Conference on Machine Learning, 2021.</i>
	Neural Architecture Search as Program Transformation Exploration. J. Turner, E. Crowley, M. O'Boyle. <i>Architectural Support for Programming Languages and Operating Systems, 2021.</i>
	Bayesian Meta-Learning for the Few-Shot Setting via Deep Kernels. M. Patacchiola, J. Turner, E. Crowley, A. Storkey. <i>Advances in Neural Information Processing Systems, 2020.</i>