

Shiwen Qin

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 LinkedIn |  Github |  Google Scholar

EDUCATION

- **University of Edinburgh** 12/2023 - 05/2027 (Expected)
PhD in Machine Learning Edinburgh, UK
 - **Title:** Adapting Large Language Models for Accelerating Automated Machine Learning
 - **Supervisor:** Dr Elliot J. Crowley, Dr Shay B. Cohen
- **King's College London** 09/2018 - 06/2023
Msci Computer Science (Artificial Intelligence) London, UK
 - **First Class Honours**
 - **Key Modules:** Deep Learning (94%), Machine Learning (73%). Computer Vision (93%), Multi-Agent Systems (83%)
 - **Master's Project:** Employee Rostering Platform (Colab with AWS and London City Airport)
 - **Bachelor's Project:** Resource-Constrained Project Task Scheduling
 - **Supervisor:** Dr Sanjay Modgil

PUBLICATIONS

- **Transferrable Surrogates in Expressive Neural Architecture Search Spaces** 
AutoML 2025
Qin S., Kadlecová G.*, Pilát M., Cohen S. B., Neruda R., Crowley E. J., Lukasik J., Ericsson L.*
 - Developed transferable surrogate models for neural architecture search in large expressive search spaces.
 - Demonstrated strong cross-dataset transfer ability across multiple Unseen NAS benchmarks.
 - Shown potential of using surrogates as direct search objectives to cut computation while remaining competitive with baselines.
- **ONNX-Net: Towards Universal Representations and Instant Performance Prediction for Neural Architectures** 
Under Submission
Qin S., Auras A., Cohen S. B., Crowley E. J., Moeller M., Ericsson L., Lukasik J.
 - Introduced ONNX-Bench, a unified benchmark of over 650k ONNX architectures for cross-search-space NAS research.
 - Developed a text-based ONNX encoding and LLM surrogate that predicts neural network accuracy across diverse architectures.
 - Demonstrated strong zero-shot performance prediction and transfer across NAS benchmarks and datasets, with detailed ablations on encoding and model design.

WORK EXPERIENCE

- **SenseTime** 07/2021 - 06/2022
Algorithm Optimisation Intern Beijing, China
 - Collaborated with team members to iteratively locate, isolate, and resolve issues about a novel face recognition system with an Agile approach. Achieved a rise in True Accept Rate (TAR) from 78% to 90%.
 - **Applied for a patent (CNIPA) as first inventor for a method to improve accuracy of face recognition based on feature fusion & threshold curve.**
 - Designed improvement strategies for X-ray prohibited items detection algorithm and achieved 4X increase in object detection rates.
 - Created & maintained project page on company internal wiki.

ACADEMIC ENGAGEMENT

- **Tutoring:** Data Analysis and Machine Learning(2025), Introduction to Python(2025)
- **Reviewing:** TMLR(2025)

TECHNICAL SKILLS

- **Language:** Python (Numpy, Matplotlib, Scikit-learn, Pandas), MySQL, Shell
- **Frameworks:** PyTorch, Transformers
- **Others:** Git, L^AT_EX, HPC slurm