

THOMAS ROGERS

MSci (ARCS) MRes PhD

CONTACT

 N/A Online

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 [Google Scholar](#)

 github.com/twrogers

TECHNICAL SKILLS

Programming: Python, Matlab, Mathematica, C/C++, Fortran, Java, HTML/CSS/JS, React JS.

Machine learning frameworks:

PyTorch, GPyTorch, PyTorch Geometric, Tensorflow/Keras, scikit-learn, matconvnet.

Machine learning: Graph Neural Networks, Gaussian Processes, Kernel Methods, Computer Vision, Classification, Object Detection, Segmentation, Unsupervised Learning, Active Learning, GANs, VAEs, Regression, Transformers, RNNs.

Deployment: tensorflow-serving, gRPC/protobuf, Flask, Docker, Kubernetes, CI/CD.

Regulatory: EU MDD/MDR including Clinical Evaluation Report (CER), Usability Engineering, Risk Management.

KEY AWARDS & PRIZES

- **Silver Award for Engineering** (top PhD student in UK), Set for Britain, House of Commons
- Tessella Prize for Software, Most outstanding MSci Thesis, Imperial College
- Special Prize for best performance in Computational Physics, Imperial College
- Prize for best performance in MRes taught modules, UCL

REFERENCES

Available upon request.

RELEVANT EXPERIENCE

Lead Researcher, Property, [Tractable](#), 2021 - Present

- Leading research for new property & natural disaster vertical

Quantum Machine Learning Scientist, [Rahko](#), 2019 - 2021

- Developed SOTA deep learning methods for the generation of novel drugs and materials, and for the prediction of quantum mechanical, physicochemical, biophysical and physiological properties of materials and drugs (crystals and molecules).
- Supervised UCL MSc project on graph neural networks.
- Led development of two MVPs (in chemistry & radar imaging).
- Company was acquired by [Odyssey Therapeutics](#).

Chief Artificial Intelligence Officer, [Visulytix](#), 2019 - 2019

- Oversaw the translation of machine learning R&D into software products in ophthalmology.
- Company exited - product continues to be used around the world by [Orbis](#).

Senior Data Scientist, [Visulytix](#), 2017 - 2019

- Led a team in the research and development of algorithms for AI decision support in ophthalmology.
- Company lead on deployment and internal software tools.
- Clinical evaluation, risk analysis and usability engineering.

Data Scientist, [Visulytix](#), 2017

- Research and development of algorithms for AI decision support in ophthalmology.

Postdoctoral Researcher, [UCL](#), 2016 - 2017

- Research on unsupervised anomaly detection and supervised threat (e.g. [weapons](#)) detection from security images, and virtual reality solutions for security screening.

PhD Student, [UCL](#), 2012 - 2016

- Classical computer vision and deep learning for detection of threats in security imagery, and inverse problems for image quality improvement.
- **Thesis:** [Automated analysis of X-ray images for cargo security](#)

Research Student, [Imperial College](#), 2012 - 12

- Developed the [Density Matrix Quantum Monte Carlo](#) method for applications to quantum chemistry and quantum information. Contributed to the [HANDE](#) code.

Research Scientist, [DSTL](#), 2011

Research Scientist, [Universität Dortmund](#) & [CERN](#), 2010

EDUCATION

- PhD, *Computer Science*, [UCL](#), 2017
- MRes (Distinction), *Security Science*, [UCL](#), 2013
- MSci (1st Hons), *Phys. with Th. Phys.*, [Imperial College](#), 2011