

THE UNIVERSITY OF MANCHESTER
PARTICULARS OF APPOINTMENT
FACULTY OF SCIENCE & ENGINEERING
SCHOOL OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE
LECTURER / SENIOR LECTURER IN MACHINE LEARNING
VACANCY REF: SAE-022370

Salary:	Lecturer grade 7 £44,414 to £54,421 or Senior Lecturer grade 8 £56,048 to £66,890 per annum, depending on relevant experience
Hours:	1 FTE
Duration:	Permanent
Location:	Oxford Road, Manchester

Enquiries about the vacancy, shortlisting and interviews:

Name: Professor Samuel Kaski

Email: Samuel.kaski@manchester.ac.uk

The University of Manchester

The University of Manchester is the largest single-site university in the UK, with the biggest student community. In total, 25 Nobel Prize winners have worked or studied here. The campus, at the heart of the city, is alive with student activity day and night. We are ranked 33rd in the world and sixth in the UK in the 2019 Shanghai Jiao Tong World Ranking.

Faculty of Science and Engineering

The *Faculty of Science and Engineering* is large and comprehensive, with two component schools: Engineering and Natural Sciences, comprising nine departments – School of Engineering: Computer Science; Mechanical, Aerospace and Civil Engineering; Electrical and Electronic Engineering; Chemical Engineering and Analytical Sciences; School of Natural Sciences: Chemistry; Earth and Environmental Sciences; Mathematics; Materials; and Physics and Astronomy. Together with eight research institutes (Manchester Institute of Biotechnology, the Photon Science Institute, Dalton Nuclear Institute, National Graphene Institute, Manchester Energy, the International Centre for Advanced Materials, the Manchester Institute for Mathematical Sciences and the University of Manchester Aerospace Research Institute) the Faculty has a diverse portfolio at the highest quality. Many major advances of the 20th century began here, including the work by Rutherford on the splitting of the atom and the development of

the world's first digital stored-program computer. Today, research activities remain at the cutting-edge and the Faculty now generates in excess of £125M in research funding each year.

Department of Computer Science

Manchester has a long and distinguished track record in the research and teaching of core Computer Science, and across interfaces to adjacent disciplines. Founded upon the pioneering work of Williams, Kilburn and Turing, the Department was the first academic Department of Computer Science in the UK and one of the first to run an undergraduate programme. The research strength of the Department is reflected in consistently strong returns in UK research assessment exercises (5* in RAE 2000, 2nd in Research Power in RAE 2008, 4th in overall GPA in REF 2014 and ranked equal 1st for research environment), and in REF2021, 99% of our research activity was judged as world-leading or internationally excellent, with 100% of our research environment judged to be of world-leading status.

The Department is among the largest in the country, and thus has been able to develop research and teaching profiles that are both broad and deep, reflecting critical mass both in core areas of the discipline (e.g. computer architecture, computer engineering, information management, logic and automated reasoning, machine learning and robotics, and text mining) and in several interdisciplinary fields (e.g. nanotechnology, bioinformatics, and health informatics, neuro-morphic computing and HPC systems).

Machine Learning

The Machine Learning activity at Manchester spans many research groups and departments. Topics of interest to current staff in the Department of Computer Science include for example: **causal modelling, dimensionality reduction, deep learning, information theoretic methods, reinforcement learning, game theory, text mining, computer vision and language in developmental robotics**. In addition, we engage strongly with interdisciplinary work such as **systems biology** (Ratray), **biomarker identification, energy demand management, and systems biology**.

Job Description - Lecturer in Machine Learning

You will join an internationally leading Department of Computer Science. You will therefore be required to carry out high quality research, to disseminate it in suitable high-impact outlets, to secure significant research funding and to contribute to the Department's teaching activities. The specific responsibilities of the person appointed will be agreed with the Head of the Department of Computer Science and will evolve with time. **The primary expectations are that you will establish and continue to grow the following aspects of the role:**

Research

- Further develop a strong record of output of high-quality, peer-reviewed research publications
- Develop a suitable research group including obtaining research funding, leadership of this research group, and collaborating with relevant colleagues, both internally and externally
- Supervise PGR students successfully
- Develop a strong standing in your research community
- Support the careers of others, including research students and postgraduate researchers

Teaching

- Teach on the undergraduate and postgraduate programmes of the Department of Computer Science
- Contribute to teaching related administration, examination, and to curriculum design
- Supervise undergraduate and taught postgraduate student projects and tutorials

Other

- Contributing to the management of the Department's activities and broader objectives of the Department.

Person Specification - Lecturer in Machine Learning

The appointee will be expected to develop a research program, to supervise research students and staff and to develop teaching materials. The appointee is expected to have the following:

Essential

- A relevant PhD (or equivalent qualification) plus experience in a relevant discipline.
- A sustained record of high-quality publications in the best ML outlets, such as ICML, NeurIPS, AISTATS, JMLR, PAMI, ECML, ICLR, IJCAI, AAAI, MLJ.

Desirable

- Experience of supervising/co-supervising (potentially in an informal capacity) PhD students in ML
- The ability to enthusiastically teach aspects of UG/PG programmes in CS
- Evidence of service to the research community, e.g., programme committees and reviewing
- Experience of supervising/co-supervising (potentially in an informal capacity) PhD students in your area of research
- Involvement in research funding applications and organisation of a research group
- Several years of postdoctoral experience and collaboration with major labs internationally.
- Experience of working in, or with, industry.
- Successful experience of supervising postgraduate students.

Job Description - Senior Lecturer in Machine Learning

The specific responsibilities of the person appointed will be agreed with the Head of the Department of Computer Science and will evolve with time. **The primary expectations are to have and continue to grow the following:**

Research

- Further develop established record and continuing trajectory of output of high-quality, peer-reviewed research publications
- Further develop a suitable research group including obtaining research funding, leadership of this research group, and collaborating with relevant colleagues, both internally and externally
- Expand experience of successful supervision of PGR students
- Further develop a strong standing in your research community

- Support the careers of others, including research students and postgraduate researchers
- Teaching**
- Expand experience of teaching undergraduate and postgraduate students in Computer Science
 - Further contribute to teaching related administration, examination, and to curriculum design
 - Supervise undergraduate and taught postgraduate student projects and tutorials
- Other**
- Contributing to the management of the Department's activities and broader objectives of the Department.

Person Specification -Senior Lecturer in Machine Learning

The appointee will be expected to have their own research program, to supervise research students and staff, to develop new initiatives and lead activities in the Department. The appointee is expected to have the following:

Essential

All essential criteria as written in the lecturer post, plus in addition:

- Demonstrable success in research funding applications.
- A growing and self-evident reputation in the international community.
- Demonstrable ability to stimulate research activity beyond your own agenda.
- Experience in teaching and assessing undergraduate or post-graduate students.
- Experience in supervising postgraduate students.

Desirable

As written in the lecturer post, plus in addition:

- Evidence of your research having impact beyond academia (e.g., industry, society, education, policy etc).