

The Alan Turing Institute

Research Fellow, Machine Learning in Finance

THE ALAN TURING INSTITUTE

There has never been a more significant time to work in data science and AI. There is recognition of the importance of these technologies to our economic and social future: the so-called fourth industrial revolution. The technical challenge of keeping our data secure and private has grown in its urgency and importance. At the same time, voices from academia, industry, and government are coming together to debate how these technologies should be governed and managed.

The Alan Turing Institute, as the UK's national institute for data science and artificial intelligence, plays an important part in driving forward advances in these technologies in order to change the world for the better.

The Institute is named in honour of Alan Turing, whose pioneering work in theoretical and applied mathematics, engineering and computing is considered to have laid the foundations for modern-day data science and artificial intelligence. The Institute's goals are to undertake world-class research, apply its research to real-world problems, driving economic impact and societal good, lead the training of a new generation of scientists, and shape the public conversation around data and algorithms.

After launching in 2015 with government funding from EPSRC and five founding universities, the Institute has grown an extensive network of university partners from across the UK and launched a number of major partnerships with industry, public and third sector. Today it is home to more than 500 researchers, a rapidly growing team of in house research software engineers and data scientists and a business team.

THE ROLE

The Alan Turing Institute is looking to build on existing research success at the intersection of machine learning, finance and economics.

The adoption of machine learning and artificial intelligence methods in the financial services industry is opening the door to more robust data-driven decision processes. The Finance and Economics programme brings together a multidisciplinary team of researchers, practitioners and regulators to promote the responsible adoption of AI techniques in the financial services industry and wider economy.

The successful candidate should show considerable promise in research in the broad area of data science and machine learning. A track record of research in finance and/or economics is beneficial but not necessary; candidates should nevertheless demonstrate their interest in the application of modern computational and statistical methods in these areas.

The post offers the applicant an exciting opportunity to pursue world-class research and to develop her/his career. The ideal candidate will have a demonstrated ability to work in a highly collaborative manner and be enthusiastic about engaging widely across disciplinary boundaries and with industry, government and the third sector. The successful candidate will help us deliver successful activity including:

- **Advancing economic data science** - an emerging field combining machine-learning techniques with innovative datasets to shed light on the economy. The programme seeks to leverage these insights to address challenges of national and international importance and inform policymaking.

- **Promote the responsible adoption of AI and data science techniques in the financial services industry** - trustworthy and efficient use of data to improve the resilience and stability of the financial system. The programme is actively developing tools, example use cases and best practice policies for data-driven decision-making
- **Drive fundamental research in AI and data science techniques to produce trustworthy algorithms that enable responsible innovation.** The programme produces scholarly, reproducible research to build the foundations for future progress in AI innovation.

Particular areas of activity in the program include:

- modelling of complex economic systems and their calibration using large scale but disparate data sources;
- building methods to enable robust decision making with uncertainty and online learning; and
- developing best practice in the deployment of AI methods in financial institutions

DUTIES AND RESPONSIBILITIES

- Conduct research at the top international level, in collaboration with others across the Turing, university partners, industry partners and the community beyond, towards outputs and outcomes that yield significant academic, societal or economic impact.
- Liaise with industry partners to gain an understanding of industry challenges and specific use cases.
- Play a role in advancing the Turing's Finance and Economic Programme.

PERSON SPECIFICATION

The successful candidate will have:

ESSENTIAL

- A PhD in a quantitative field, or publication record showing equivalent experience, with demonstrated sustained intellectual leadership in an area of relevance.
- **Hands-on experience with Machine Learning methods relevant for financial and economic applications.**
- **Demonstrated enthusiasm and ability to rapidly assimilate new computational and mathematical ideas and techniques on the job, at a more than superficial level, and apply them successfully.**
- Track record of outstanding research and in delivering impact.
- Track record of obtaining funding to support research, appropriate for career stage.
- Ability to create and promote a collegial and collaborative approach to interdisciplinary research activities.
- Evidence of outstanding capability in identifying future research directions in Machine Learning.
- Demonstrated ability to develop, lead and support a successful research team and maximise the potential in others.
- Excellent written and verbal communication skills, including experience in publishing research papers, code libraries or technical reports and giving presentations or classes on technical subjects.

DESIRABLE

- Experience with practical applications of Machine Learning to financial use cases, and/or experience working with a financial services organisation.

APPLICATION PROCEDURE

If you are interested in this opportunity, please click the apply button below. You will need to register on the applicant portal and complete the application form including your CV, covering letter and contact details for your referees. If you have questions about the role or would like to apply using a different format, please contact them via email recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: 19 August 2020 at 23:59

TERMS AND CONDITIONS

This full-time post is offered on a fixed-term contract for a period of 24 months, The annual salary for this post is £45,000 plus excellent benefits, including flexible working and family friendly policies, <https://www.turing.ac.uk/work-turing/why-work-turing/employee-benefits>

This job description is written at a specific time and is subject to change as the demands of the Institute and the role develop. The role requires flexibility and adaptability and the post holder needs to be aware that they may be asked to perform tasks and be given responsibilities not detailed in this job description.

EQUALITY, DIVERSITY AND INCLUSION

The Alan Turing Institute is committed to creating an environment where diversity is valued and everyone is treated fairly. In accordance with the Equality Act, we welcome applications from anyone who meets the specific criteria of the post regardless of age, disability, ethnicity, gender, gender reassignment, marital and civil partnership status, pregnancy, religion or belief or sexual orientation. Reasonable adjustments to the interview process can also be made for any candidates with a disability.

Please note all offers of employment are subject to continuous eligibility to work in the UK and satisfactory pre-employment security screening which includes a DBS Check.

Full details on the pre-employment screening process can be requested from HR@turing.ac.uk.