Social Data Scientist – Women in Data Science and AI

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.

BACKGROUND

The public policy research programme works alongside policy makers to explore how data-driven public service provision and policy innovation might help to solve long running societal problems. We also work hand-in-hand with public sector organisations and citizens to develop practice-based ethical standards for the responsible development and use of data science and AI.

In addition to our work with government and regulators, we carry out interdisciplinary academic research on a wide variety of topics, from identifying policy priorities using agent computing to tackling modern slavery and quantifying online hate speech. Our research projects rely entirely on public funds and their primary aim is to contribute to the Institute's mission of making great leaps in data science and artificial intelligence research in order to change the world for the better.

The Women in Data Science and AI project sits within the Turing's Public Policy programme. It conducts data science and social science research, looking through an intersectional lens, to provide data-driven insights informing concrete policy measures aimed at increasing equality in the data science and AI fields in the UK and globally.

The under-representation of women and marginalised groups in data science and AI leads to the encoding and amplification of bias in technical products, creating a dangerous feedback loop that further discriminates against those not involved in the creation of the technology. The Women in Data Science and AI project engages both quantitative and qualitative research to inform our understanding of the gender gap in data science and AI, exploring the multifaceted ethical, economic and governance-related issues stemming from the under-representation of women in the fields, including gender data gaps, and generating actionable insights and recommendations to tackle it.

Project work to date has included a major collaboration with UN Women on the implications of digital technologies for gender equality and women's rights internationally, generating concrete policy recommendations; the creation of a 'Hub' website to connect women in the UK with resources, news and research in the data science and AI fields; the development of a 'Diversity Dashboard' tool to offer insights into gender inclusion within online workplaces; and the recent publication of the seminal policy report 'Where are the women? Mapping the gender job gap in AI'. Current work includes investigating diversity and inclusion in tech workplace cultures (both online and in organisations) across sectors.

ROLE PURPOSE

The Public Policy Programme is recruiting a Social Data Scientist to work on the Women in Data Science and AI project. They will be responsible for conducting original end-to-end social data science research, from proposal and design to

implementatation and dissemination, with a focus on policy recommendations. This two-year positon will include identifying, negotiating and collecting relevant data, as well as using statistical data analysis and machine learning methods to draw insights into aspects of women and marginalised groups in the fields of AI and data.

The successful candidate will use quantitative methods to extract insights from data, translate them into actionable recommendations, and communicate findings to diverse audiences. They will be expected to work collaboratively within the Women in Data Science and AI project, complementing existing mixed methods research undertaken by the team. It is also expected that identifying and building relationships with external collaborators, such as new data partners, will form a significant part of the role.

The successful candidate will report to the Postdoctoral Research Fellow, Dr. Erin Young, and collaborate with the wider Women in Data Science and AI team and Public Policy Programme, primarily Professor Judy Wajcman. The post-holder will work closely with academics, as well as government and industry stakeholders, in an interdisciplinary, dynamic, and collaborative environment.

DUTIES AND AREAS OF RESPONSIBILITY

The core responsibilities of the Social Data Scientist are as follows:

- Design and conduct original, end-to-end social data science research to achieve the objectives of the Women in Data Science and AI project, drawing insights into aspects of women and marginalised groups in AI. This will complement existing work plans and ongoing mixed methods initatives undertaken by the team;
- Identify relevant data, and manage data access negotiations and collection, as well as storage and analysis. This will include building and maintaining relationships with external stakeholders and data gatekeepers where necessary;
- Implement data science and machine learning methods to extract insights from data and translate them into actionable policies and other recommendations;
- Lead on the development, preparation and delivery of research outputs and resources tailored to different audiences, ranging from policy-makers to researchers, industry and the general public. This includes, for example, writing briefing papers, articles and other reports;
- Stay up-to-date with progress in related fields;
- Participate in internal and external meetings, for example, with representatives of government agencies, industry and potential partner organisations;
- Implement and manage work-plans to ensure timely delivery of objectives.

OTHER DUTIES

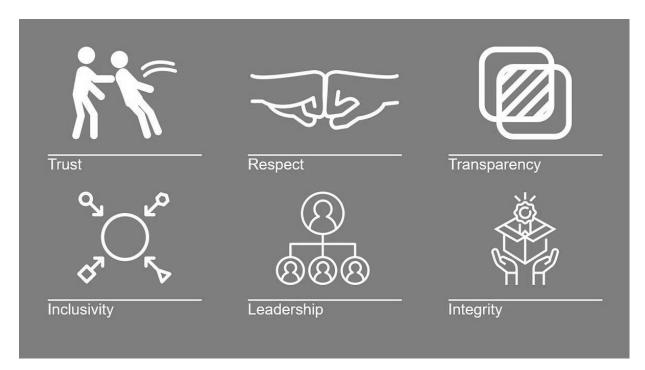- Teaching may be required as part of collaboration work

Please note that job descriptions cannot be exhaustive, and the post-holder may be required to undertake other duties, which are broadly in line with the above key responsibilities. This job description is written at a specific time and is subject to changes as the demands of the Institute and the role develop.

The Alan Turing Institute

PERSON SPECIFICATION		
Skills and Requirements Post holders will be expected to demonstrate the following	**Essential (E)** **Desirable (D)**	**Tested at application(a)** **Tested at interview (i)**
Education/Qualification		
Masters degree in social data science, statistics, computational social science, computer science, or related discipline.	E	A
PhD-level degree or equivalent professional experience in data science, computational social science, statistics, computer science, or related quantitative discipline.	D	A
Knowledge and Experience		
Demonstrably strong methodological and theoretical foundations and experience designing and conducting fieldwork and data collection at the intersection of technology and society (e.g. relationships between social inequalities and technology).	E	A I
Proficient in identifying, negotiating, extracting, collating and analysing data from different data sources (e.g. accessing and using APIs, web scraping, social media, etc).	E	A I
Experience in using programming languages such as Python or R to manipulate and analyse data by implementing statistical and machine learning models.	E	A I
Demonstrable interest in or familiarity with any one or more of the following: (1) Science and Technology Studies (e.g. feminist technology studies); (2) intersectional gender and racial biases in AI and machine learning (e.g. in recruitment software, facial detection systems and voice assistants); (3) critical data studies and data justice, such as data feminism; (4) sociology of organisations; (5) critical algorithm studies; (6) information sciences; (7) fairness, accountability and transparency (FAT) in machine learning.	D	A I
Data visualisation skills (e.g. Matplotlib, ggplot, or Tableau), and ability to communicate results to non-technical audiences via clear graphics or interactive visualisations.	D	A I
Experience researching in an area related to social data science within policy or technology organisational settings such as governmental agencies or tech companies.	D	A I
A developing record of scientific publication (appropriate to stage of career development), which may include journal articles, book chapters, and policy reports/white papers.	D	A
Communication		
Excellent writing and speaking skills, and proven ability to communicate complex, specialist or conceptual information/research findings clearly and persuasively to diverse audiences.	E	A I
Liaison and Networking		
Experience in setting up research collaborations involving multiple stakeholders, or familiarity with identifying relevant data sets, building relationships with external collaborators, and conducting data access negotiations.	E	A I
Interpersonal skills relevant to collaborating and working as part of a multi-disciplinary team and communicating with stakeholders in academia, the public sector, and industry.	E	A I
Ability to disseminate research findings and engage with internal and external stakeholders in-person and via mixed media.	D	A I

Decision Making		
Experience in leading on the design and implementation of original research and methodological plans.	**E**	**A I**
Initiative and Problem Solving		
Highly self-motivated and committed to achieving the project goals.	**E**	**AI**
Ability to work flexibly, prioritising tasks to meet deadlines and maintaining a high standard of accuracy and attention to detail.	**E**	**AI**
Analysis and Research		
Ability to organise working time, take the initiative, and carry out research independently.	**E**	**A I**
Other Requirements		
Demonstrable interest in the mission of the Alan Turing Institute, and in exploring the real-world impact of cutting-edge technology.	**E**	**A I**
Commitment to Equality, Diversity and Inclusion principles and to the Organisation values.	**E**	**I**
Commitment to meeting deadlines	**E**	**I**
Flexible attitude towards work	**E**	**I**
Commitment to EDI principles and to the Organisation values	**E**	**I**

OUR VALUES

The Alan Turing Institute is committed to equality diversity and inclusion and to eliminating discrimination. All employees are expected to embrace, follow and promote our EDI Principles and Rules of the Game

Respect – We treat everyone with respect, dignity and kindness and acknowledge the experiences, skills and contributions of others.
Trust - We communicate openly and honestly to support an environment where we have trust in each other.
Transparency – We seek to ensure that everyone understands the how and the why of our decisions and actions. We take on board to feedback when those decisions are challenged.
Inclusivity – We are committed to continuously learning how to be more inclusive by listening to those facing barriers.
Leadership – We recognise creating an inclusive, diverse and equitable institute requires leadership from all. We stand up and speak out when change is needed.
Integrity – We recognise that how we work is as important as our outputs and seek to exemplify best practice in all our decisions.

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 that outlines how you meet the job specifications, including a link to your github/website/portfolio as appropriate;
- a one-page proposal outlining what you see as the key research questions you would like to pursue, data you would like to explore, methodology, and implications for the Women in Data Science and AI project;
- sample piece of writing (an academic paper, journal article, blog post, conference proceeding, or equivalent);

Please upload additional sample writing pieces in the same attachment as your Cover Letter. Alternatively forward any additional attachments directly to recruitment@turing.ac.uk quoting the job title.

If you have questions about the role or would like to apply using a different format, please contact them on 0203 862 3357 or 0203 862 3340, or email recruitment@turing.ac.uk.

TERMS AND CONDITIONS

This full time post is offered on a fixed term basis. The annual salary range is £37,000-£42,000 plus excellent benefits, including flexible working and family friendly policies, https://www.turing.ac.uk/work-turing/why-work-turing/employee-benefits

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 reassignment, marital or civil partnership status, pregnancy and maternity, religion or belief, sex and sexual orientation.

We are committed to building a diverse community and would like our leadership teal to reflect this. We therefore welcome applications from the broadest spectrum of backgrounds.

Reasonable adjustments to the interview process will be made for any candidates with a disability.

Please note all offers of employment are subject to obtaining and retaining the right 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*.*