Fellowship Title: 10DS Economics and Data Science Fellowship

Host Organisation: No.10 Downing Street, Cabinet Office

Host Team: 10DS (No.10 Data Science Team)

Summary: Opportunity to use machine learning to further economic indicators and understand impact on citizens

Fellowship Theme: Data and Evaluation *Please see the full call text 'What We Are Looking For" for a detailed summary of the research themes targeted in this call.*

Policy Topic: Economics, economic indicators, impact of economic climate on outcomes.

Research Council: ADR UK/ESRC

Academic Discipline/s: Data Science, Economics

Research Career Stage: The opportunity may be best suited to an early career researcher

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Fellowship Structure

Inception Phase:

> **Estimated Start Date**: October 2023. *Exact date to be confirmed by the host depending on onboarding and security clearance requirements*
> **Duration:** 3 months
> **FTE:** 0.4 FTE

Main Placement Phase:

> **Duration:** 12 months
>
> **FTE:** 0.6-1 FTE

Knowledge Exchange Phase:

> **Duration:** 3 months
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> **FTE:** 0.4 FTE

Work Arrangements

Location Requirements: 10DS is London based, and therefore some ability to travel to London to co-locate with the team would be beneficial but can be done remotely. *Eligible T&S costs are supported via the main UKRI grant. Please see full call text and guidance for more details.*

Hybrid Working: Hybrid working is welcomed. No specified expectations on pattern.

Security Clearance: This post requires security clearance (SC), as per No.10 general policy. Clearance can take up to 12 weeks. We would expect the successful applicant to start the security clearance application process, with support from the host team, as soon as their Fellowship has been confirmed by ESRC. Some limited components of the inception phase may be possible to initiate ahead of final clearance, but will have significant limitations on engagement until security process is complete. See National security vetting: clearance levels - GOV.UK (www.gov.uk).

In addition, this post holder will need to become an accredited researcher of the Office of National Statistics (ONS) Secure Research Service (or other ADR UK Trusted Research Environment) in order to access inked administrative data. As well as, once the project is agreed, submitting a research project application for accreditation. We can support in preparation and completion of this certification.

Fellowship Opportunity Description

Apply for funding to spend a year collaborating with 10 Downing Street's data science team (10DS).

Formed in mid-2020, 10DS has a remit to radically improve the way in which key decisions are informed by data, analysis and evidence. We do this by:

1. Enabling No10 to utilise the best available evidence by combining cutting-edge data science with clear, engaging communication throughout the policy and decision-making process, ensuring that the Prime Minister and staff are intelligent customers of analysis, and embedding a culture of evidence-informed policy
2. Provoking positive change across central government through providing challenge and feedback, and collaborating across Whitehall to drive long-term systems change and collectively solve the most pressing policy challenges

Improved recording of and access to data present significant opportunities to improve timeliness and accuracy of our economic forecasts, and understanding of how trends, macro and micro, impact citizens across the country. This fellowship should focus on how data science can help us better understand localised experience of the economic climate, and how individuals and groups are differentially impacted to improve government's ability to respond. We are looking for a fellow to explore how data science methods can further our ability to understand localised economic impacts. These might include the effect of changing economic conditions, such as prices, on different consumer groups, and our real-time understanding of hyper-local economic activity.

Work undertaken might include activities such as working with the ONS to access and analyse supermarket scanner data to assess price changes on essential goods, developing real time economic indicators that are geographically sensitive, and developing methods for evaluating the economic impact of policy intervention or public spending on a specific area.

A successful candidate will:

- Co-design research and produce analysis using new and existing data sources, including linked administrative data sets to inform economic policy;
- Produce data products and resources to support ongoing use of the methods and indicators developed;
- Champion data science across central government and support wider knowledge exchange with researchers on effective policy collaboration and data analysis.

The main theme for this opportunity is Data and Evaluation though the successful fellow will scope, with the host, an area of focus that could also address other themes such as Improving Outcomes.

The fellow will have the opportunity to co-design clear research tasks in collaboration with officials in government based on policy needs and the fellow's interests/skills during the inception phase of the fellowship.

As a co-funder, ADR UK would like to see the fellow's project make use of linked administrative data via it's Trusted Research Environments. There is more linked administrative data securely accessible for research than ever before with great potential for evaluating public policy and improving outcomes. ADR UK's brochure is an accessible document to understand what data is currently available and the potential of this data.

Person Specification

Applications will be assessed against the following opportunity-specific requirements in addition to the generic eligibility and call criteria.

We welcome applicants from all fields of specialisation but are especially interested in applicants with experience in economics *and* deploying data science techniques such as machine learning (NLP, network graph analysis, productionised decision making), topic modelling, and clustering.

Essential Criteria:

You must:

- Have a PhD or equivalent experience in economics or data science;
- Have strong numeracy and experience deploying a range of analytical techniques;
- Have excellent communication skills with the ability to translate complex information into meaningful, easily understood narratives;
- Have a strong interest in use of data and evidence to drive better outcomes

- Have an interest in exploring novel data visualisation and data product approaches to engaging consumers of analysis;
- Show a willingness to provide knowledge transfer and skill development within the organisation or across government.