# Train@Ed Fellowship
## Capturing & Interpreting Visitor Flow & Characteristics for Attractions, Museums & Galleries

Many visitor attractions do not have sufficient data or a sustainable method of analysing how visitors use the physical environment (where they go, where they don't go, when they arrive, when they leave, the typical route through the building(s)?) In addition, most free visitor attractions have limited means to identify who is visiting (where are they from? Are they local or international? Why did they come? Are they repeat visitors?) Consequently, many decisions made by these organisations are made without access to data analysis products that reflect the real behaviours of visitors.

We are seeking a Post-Doctoral Researcher at the University of Edinburgh Business School and the IoT Research and Innovation Service to lead on research to the creation and analysis of sustainable new data sources and unlock unused data sources to develop tailored methods to understand how visitors flow through and across attractions in the Edinburgh & South-East Scotland City Region. We want to help enable attractions and those responsible for delivering services to tourists including local government, public transport and the hospitality industry, to make data-informed decisions. These include ways to improve operational efficiency, design better visitor experiences and make long-term planning decisions.

This project will seek to:

1. Investigate the current and best methods used to capture and model visitor flow in attractions alongside the business needs of the region's visitor attractions;
2. Select the suitable IoT devices to capture flow data for selected sites based on the needs and constraints of visitor attractions;
3. For visitor characteristics/demographic data capture processes, new methods will be designed that allows for ethical, privacy-preserving and secure data-sharing;
4. Undertake initial exploratory analyses to focus on modelling the typical flow(s) through different visitor attractions; identifying and addressing data quality issues; targeted analysis against attractions' identified business challenges;
5. Create visualisations for the analyses the visitor information to enable non-expert interpretation;
6. Explore the practical governance of sharing data and insights between attractions

## Essential:

- A PhD in a quantitative subject including, but not limited to, Statistics, Mathematics, Computer Science or a minimum of 4 years full-time equivalent experience
- A track record in data science research and experience of applying statistical and/or machine learning techniques
- Strong computational skills in a language such as R, Python, etc.
- Previous experience of interdisciplinary research and collaborating with others
- Demonstrable interest in applying and developing data science techniques
- Strong written and oral communication skills
- You must meet the eligibility criteria found here

## Desirable:

- Experience of working with multiple forms of data and potentially large and incomplete datasets
- Practical experience of large regression problems
- Experience of using data generated from IoT devices
- Interest in working with museums, galleries and attraction and their related data challenges
- Evidence of collaborating and communicating with industrial partners about their business needs

If you would like to apply for a TRAIN@Ed Fellowship at the University of Edinburgh and would like to work with us to create this Attractions, Museums & Galleries Visitor Flow project please contact Joshua Ryan-Saha [joshua.ryan-saha@ed.ac.uk] & Ksenia Siedlecka [Ksenia.Siedlecka@ei.ed.ac.uk] as soon as possible.

Informal discussions with potential applicants have been scheduled for the week commencing the 21st October.


Data-Driven Innovation