

## **Job Description: PCREP Research Fellow in Interactive Data Visualisation**

The Research Fellow in Interactive Data Visualisation will contribute to the development, operation and support of research for the FCDO-funded Peace and Conflict Resolution Evidence Platform (PCREP). Staff will be expected to support the overall delivery of the Programme, and the University of Edinburgh's outputs.

The Research Fellow in Data Visualisation will be based in the Law School and will work under the supervision of the Programme Director, Professor Christine Bell, but also liaise with colleagues in the School of Informatics and wider PCREP Programme.

### **1. Job Details**

Job title: Research Fellow in Interactive Data Visualisation (1.0 FTE)  
School: School of Law  
Line manager: Professor Christine Bell  
Start date: 01/11/2021  
End date: 31/03/2022  
Grade: UE07 (the panel will consider appointing at UE08 in exceptional circumstances)

### **2. Job Purpose**

The post-holder will design, develop, deploy, and evaluate interactive visualisations to help with the understanding of data related to peace and conflict. The post holder is expected to institutionalise a participative approach to design, which understands visualization as a tool for engagement in peace processes, as much as a communication tool. The position will involve close collaboration with Professor Christine Bell (Programme Director), Dr Benjamin Bach, Dr Sanja Badanjak, Dr Devanjan Bhattacharya, and the wider PCREP programme team.

PCREP hosts the PA-X Peace Agreements Database (PA-X Main) and its sub-databases (PA-X Gender, Local, Ceasefires). The post-holder will work closely with these datasets to design and carry out research relating to the data, visualisations, and PCREP's PeaceTech research theme. The post-holder will also be expected to provide visualizations related to 'network mapping' in contexts of complex actors and geographies, and to support the generation of 'digital dashboards' as tools for deliberative decision-making, which draw together data from different data sources. Where possible, the post-holder will not just create visualizations but will create public interfaces for other researchers and peacebuilders to support the future customisation and use of the visualization developed. The post-holder will both design visualizations and work to customise and adapt other existing visual tools.

### **3. Main Responsibilities**

On a day-to-day basis the post will involve collaborating on design of interactive digital data outputs, and full programming for delivery of high-quality digital outputs, which can be publicly shared and used. The post holder will be expected to develop an iterative design approach which incorporates end-user feedback and revision, which see visualizations evolve through ongoing feedback loops. The post-holder will also be expected to contribute to building a 'PeaceTech' architecture for data design for the future.

The post-holder will be expected to work both on their own initiative and under supervision, as part of a cooperative research team and environment to produce high-level visual outputs, static visual support for policy briefing papers, in-time research briefs, and presentations. The Research Fellow will also be expected to contribute to academic literature in the field of data visualization with reference to how it can be used to support peace processes and research. The Research Fellow will also be expected to play a role in the development of PeaceTech research as a whole and to assist in its coordination across Programme partners and projects.

Specific responsibilities include to:

- design and deploy novel interactive exploratory visualizations and dashboards for peace and conflict data, such as social networks, geographic data, geo-temporal data;
- evaluate visualizations in lab studies and in-the-wild studies;
- co-design visualizations with a range of domain-specialists;
- produce high-quality outputs from the data, and account of innovation in process, suitable for publication in peer-reviewed journals as research outputs;
- produce parallel policy outputs which communicate key research findings and recommendations to actors in peace processes and key policy-makers in the area;
- provide for data collection about people's engagement and use of these visualisations and engage in analysing these data both for ongoing research and reporting purposes;
- provide for publishing this work in accessible formats online, including on project websites;
- assist in promoting these visualizations online through social media and other Programme channels;
- participate in engagement and impact activities including webinars, conferences, and workshops, for a range of different audiences;
- contribute to any PCREP-affiliated course design and teaching in a collegial manner that upholds research-led teaching best practice;
- liaise with and help coordinate students on work-based placements/dissertation placements with PCREP in a collegial manner.

#### **4. Planning and Organising**

The post-holder will be required to work to fixed reporting deadlines and be extremely organised in conducting their work to a tight timetable. They will manage their work on a day-to-day basis, guided by the overall research plan and timetable and under the supervision of Professor Bell. The post-holder will work closely with the whole PCREP team to ensure that its broad, strategic aims are being met and play a role in the coordination and good relations of the team to the delivery of complex large-scale data and associated visualizations and PeaceTech components. The post-holder is expected to innovate, both in design terms, and in process terms.

#### **5. Problem Solving**

The post-holder is expected to resolve most problems using accumulated experience but support from the line manager and various research groups within the School of Informatics is available. The post-holder will use initiative to analyse and interpret research data, and draw conclusions from it. More serious and non-standard issues should be discussed as soon as possible with Professor Bell and Dr Benjamin Bach.

#### **6. Decision Making**

The majority of decisions on a day-to-day basis are made independently using initiative and judgement and will include prioritising own workload.

## **7. Key Contacts/Relationships**

Key contacts are Professor Christine Bell (line manager), Dr Harriet Cornell (Programme Manager), Dr Benjamin Bach (Senior Lecturer, Design Informatics), Dr Sanja Badanjak (Chancellor's Fellow in Global Challenges), and Dr Devanjan Bhattacharya (Train@ED Postdoctoral Fellow); and other researchers and staff within the PCREP Programme. A mentor within the School of Law or from a relevant discipline will also be provided and contact with Senior Law School staff through processes of Annual Review.

## **8. Knowledge, Skills and Experience Needed for the Job**

### **Qualifications**

#### **Essential**

- Ph.D. (or Ph.D. close to completion) or equivalent in practical experience in data visualisation or a related discipline; or equivalent research/academic experience undertaken;
- Proven track record of excellent research and publications in high-quality conferences and journals in visualisation/human-computer interaction.

#### **Desirable**

- Masters or other post-graduate research involving a substantial element of study in the field of interactive design, development, human rights, international humanitarian law, gender or equality studies, or conflict resolution;
- Past experience in design in the policy sphere;
- Past experience with design focused on any of the following: network visualisation, statistical data, geo-referenced data;
- Past research or design experience relating to participative design which shows relationships with end-user communities;
- Past research relating to fragile and/or conflict-affected states, peace processes or agreements.

### **Experience**

#### **Essential**

- Proven track record of developing interactive methods to display datasets to high finished quality, including data visualisations;
- Experience of developing further innovative methods to display datasets, such as mobile apps or maps;
- Experience of using design to present quantitative or qualitative data analysis;
- Experience in using electronic resources and social media channels for research/research dissemination;
- Experience of using peace agreement or other similar conflict or peace datasets;
- A commitment to participative and iterative design processes.

#### **Desirable**

- Specialisation in either data-driven storytelling, geographic visualization, dashboards, or network visualisation;
- Knowledge of relevant literature on participatory design;
- Experience of working in an interdisciplinary research environment, including producing interdisciplinary visualizations;

- Experience of publishing academic or conference papers relating to design.

## **Knowledge, Skills and Competencies**

### **Essential**

- Excellent programming and software development skills for web and visualization development;
- Excellent visual and visualization design skills, including with reference to interactive design;
- Broad knowledge of human-centred design and qualitative as well as quantitative evaluation methods;
- Ability to design and execute research that has relevance for policy audiences;
- Ability to work independently;
- Excellent organisational skills;
- Excellent personal, written, and verbal communication skills;
- Ability to work as part of a team;
- A flexible approach to working;
- A commitment to high standards of integrity, ethics, managing risk, and the ethos of a programme funded with money from UK Aid and aiming to contribute to the reduction of poverty.

### **Desirable**

- Language skills in French, Arabic, Russian, or Spanish;
- Knowledge of design challenges in multilingual and/or cross-cultural settings.

## **9. Dimensions**

The Peace and Conflict Resolution Evidence Platform is funded by UK's Foreign, Commonwealth and Development Office. The post will be based in the University of Edinburgh's Old College, and also associated with the School of Informatics where some of the key researchers are based. The post does not involve direct line management of staff but the post-holder will be expected to work closely with academic and professional services staff across the Programme.

## **10. Job Context and any other relevant information**

The Programme may require the post holder to undertake domestic and overseas travel.

## **11. How to Apply**

- Applicants should submit a covering letter and CV by email to [Harriet.Cornell@ed.ac.uk](mailto:Harriet.Cornell@ed.ac.uk);
- This post may suit a secondment or consultancy opportunity;
- Applications should be submitted by Thursday 14 October 2021;
- Interviews will be held in October 2021;
- This post has a start date of 1 November 2021 and an end date of 31 March 2022.