

## Research Associate Computer Science

### *Project Title: iFLab – Internet Fragmentation Flab*

### Fixed Term for 12 months

Job Ref: REQ221725

**As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.**

The iFLab project is a longitudinal study into the issue of Internet fragmentation. This is when services provided over the Internet are not available in certain geographical areas due to technical, government or commercial interference. The successful candidate will collaborate under the leadership of Dr Iain Phillips to build a cloud-based repository of data that can be used to indicate fragmentation. They will have skills in cloud-based data management, processing and visualisation; we currently use Google Cloud Platform, BigQuery, redash.io, d3.js, but will entertain new and alternative technologies as they fit our needs. Our data comes from publicly available data sources such as OONI, Censored Planet, Tor metrics, Access Now and we will add others as they become pertinent to our study. The project is currently funded for one year, but we will be seeking funding for subsequent years shortly after appointment.

The Research Associate will be based in the internationally renowned Department of Computer Science at Loughborough University, UK. Founded in 1974, the Department of Computer Science is one of the most well-established university computing departments in the UK with a long track record of developing skilled and highly employable graduates, as well as a reputation for cutting edge research and industry engagement. Based in the recently multi-million pound refurbished Haslegrave Building, the Department is one of the largest within the School of Science. Loughborough University is one of the country's top 10 universities, consistently ranked by the Guardian Good University guide and other assessment indexes, confirmed as having world-class research facilities in sports, engineering and sciences and has been awarded a record seven Queen's Anniversary prizes for impact to society and UK industry.

### **Project Description**

iFLab is funded by Cisco at Loughborough University. The project team is led by Dr Iain Phillips and builds on the research of PhD researchers. The aim of the project is to provide a cloud-based lab environment to process data that indicates potential Internet fragmentation. Fragmentation here is defined as the effects that occur when particular Internet services are not available from the entirety of the Internet due to actions taken by Internet Service Providers or other stakeholders, or simply due to technical changes to the Internet provision. The RA will be responsible for large-scale collection of different data sets, working out appropriate joins and building frameworks suitable for visualisation and machine learning.

### **Job Description**

**Job Grade:** Specialist and Supporting Academic Grade 6

**Job Purpose:** To be responsible to for the cloud implementation of a data gathering and processing framework and to provide APIs to the data for the support of visualisation and machine learning algorithms.

### **Job Duties**

- To become familiar with the aims of iFLab and the related literature.
- To design a suitable data framework for iFLab data.
- To implement the framework so that it will sustain for several years.
- Be responsible for conducting the day-to-day running of the project.
- To formulate detailed plans for the project based on broad guidance from the project team.
- To feed back to the project team on progress, to make recommendations for next steps.
- Write up regular progress reports and present outcomes to all Investigators and Collaborators.
- Travel to attend meetings and make presentations both within the project partners working group and to external stakeholders.
- To write research papers suitable for publication in high quality academic journals.
- To attend and contribute to conferences.
- Where appropriate, to assist the academic staff in the project team with the supervision of undergraduate MSc and PhD project work and day-to-day supervision and support of other researchers.
- Engage in training programmes in the University (or elsewhere) that are consistent with the needs and aspirations of the project and those of the Department.
- Undertake other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

### **Points To Note**

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

### **Special Conditions**

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Respecting Diversity and, where appropriate, Recruitment and Selection.

### **Organisational Responsibility**

Reports to the Project leader – Dr Iain Phillips

## Person Specification

Your application will be reviewed with respect to meeting the essential and desirable criteria listed below. Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

- 1 – Application
- 2 – Test/Assessment Centre/Presentation
- 3 – Interview

### Essential Criteria

Area	Criteria	Stage
Experience	Background in Computer Science with an understanding of Internet networking, routing and fragmentation.	1
	Experience of programming cloud systems for data storage.	1,3
Skills and abilities	The ability to discover and learn the workings of suitable cloud frameworks for the needs of the iFLab project.	3
	The ability to communicate research outcomes to a wide variety of audiences, both in person and in written form.	2,3
	The ability to understand a problem, specify solutions and implement them.	2,3
	The ability to work with and within a team environment on a shared objective.	3
Training	Demonstrate evidence of having undertaken further training and a willingness to take other such opportunities in the future.	3
Qualifications	At least a first degree in Computer Science with a strong focus on programming.	1
	PhD (or near completion)	1
Other	Commitment to observing the University's Equal Opportunities policy at all times together with a commitment furthering EDI objectives in the workplace.	1,3
	A commitment to maintaining a Healthy and Safe working environment at Loughborough	1,3

### Conditions of Service

The position is FULL TIME and FIXED TERM for 12 months. Salary will be on Specialist and Supporting Academic Research Grade 6 (£32,348 – 42,155 per annum) at a starting salary to be confirmed on offer of appointment. The appointment will be subject to the University's Terms and Conditions of Employment for STAFF GRADES 1-5/STAFF GRADES 6 AND ABOVE, details of which can be found [here](#).

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which can be found [here](#).

The University offers a wide range of employee benefits which can be found [here](#).

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available at: <http://www.lboro.ac.uk/services/hr/a-z/childcare-information---page.html>)

In addition, the University is supportive, wherever possible, of flexible working arrangements. We also strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see <http://www.lboro.ac.uk/services/hr/athena-swan/>