THE POST

College/Service:	**College of Engineering, Mathematics and Physical Sciences**
Post:	**Industrial Research Fellow**
Reference No:	**P57119**
Grade:	**F**
Reporting To:	**Director of the Institute for Data Science and Artificial Intelligence**

Job Description

The post is available immediately until 28th February 2021 and is part of a project, the 'Environmental Futures and Big Data Impact Lab', involving the University of Exeter, University of Plymouth, Met Office, Plymouth Marine Laboratory, Exeter City Futures, Rothamsted Research and Plymouth College of Art. It is funded through the European Regional Development Fund and forms part of the European Strategic Investment Framework for the Heart of the South West.

Main purpose of the job:

This role is funded through the European Regional Development Fund (ERDF) supported Environmental Futures and Bid Data Impact Lab. This is a 3 year project to support research, innovation and the development of new products and services small and medium sized enterprises.

The Impact Lab will provide a business-focussed innovation ecosystem, which combines existing R&D assets, infrastructure and expertise, and generates new innovation engagements between businesses and the knowledge base.

The Industrial Research Fellow will work with collaborating business partners and organisations to fulfil the research, development and innovation (RD&I) activities set out within the projects specific RD&I Project Plan. The post holder will work closely with appointed business partners, delivery partners, academic supervisors and members of the University's Impact, Innovation and Business (IIB) directorate to discharge the requirement of the Impact Lab Project Plan. The primary purpose of the role is to deliver economic impact within participating, and where relevant/ appropriate newly identified businesses from RD&I activities.

The post-holder will work as part of a new Institute for Data Science and Artificial Intelligence, an inter-disciplinary centre bringing together researchers working on all aspects of data science and AI. Central to this effort are research fellows who will work in close collaboration with problem owners and stakeholders. Research fellows will have a main thematic area in which they will be expert and conduct research: 1. Machine learning, statistics; 2. High Performance Computing for data science; 3. Data visualisation. They will work on specific, defined projects and Challenges with members of the University and commercial and industrial collaborators. Research fellows will also participate in and organise Challenge workshops for the co-creation of projects and the dissemination and deployment of the results.

The post holder will work within the legal constraints of any agreed non-disclosure agreement (NDA's) and Intellectual property (IP) protection agreed between Delivery Partners and collaborating businesses.

Main duties and accountabilities:

1. To undertake research as appropriate to the field of study including:

- Working in close cooperation the Director and members of the Institute for Data Science and Artificial Intelligence.
- Collaborating with researchers and external stakeholders, particularly small and medium sized enterprises, to understand data science related problems, develop solutions and advise on the deployment of solutions.
- Organising and participating in workshops to co-create data science Challenges.
- Dissemination and deployment of project results through publication and commercial development.
- Developing maintainable and robust software.
- Developing research objectives and ideas.
- Identifying sources of funding and contributing to the process of securing funds
- Supporting colleagues with less experience
- Developing productive working relationships with other members of staff;
- Collaborating with colleagues to ensure equitable access to resources and facilities
- Dealing with problems
- Helping colleagues to resolve their concerns about progress in their work
- Assessing, interpreting and evaluating outcomes of research
- Developing new concepts and ideas to extend intellectual understanding.
- Making presentations at national and international conferences and similar events.
- Dealing with problems which may affect the achievement of research objectives and deadlines.
- Analysing and interpreting the results of our own research, and generating original ideas based on outcomes.
- Using creativity to analyse and interpret data and draw conclusions on the outcomes.
- Developing research objectives, projects and proposals.

2. To routinely communicate complex and abstract ideas to those with limited knowledge as well as to peers using high level skills and a range of media and to present the results of scientific research to sponsors and at conferences.

3. To plan, co-ordinate and implement research programmes including managing the use of research resources and ensure that effective use is made of them.

This job description summarises the main duties and accountabilities of the post and is not comprehensive: the post-holder may be required to undertake other duties of similar level and responsibility. Please visit the Human Resources website to view the Research Fellow role profiles.

Person Specification

Competency	Essential	Desirable
Attainments/Qualifications	PhD or equivalent in computer science, applied mathematics or a closely related field of study.	
Skills and Understanding	A high level of proficiency in a high level computing language. Expertise in at least one of: machine learning and statistics; high performance computing for data science; data visualisation. A track record in academic publications commensurate with experience. Willing to learn the about new application domains.	Experience in cloud-based computing paradigms. Experience of high performance computing (CUDA/OpenMPI). Experience of creating software packages for wider community use.
Prior Experience	Experience of managing research projects and research teams.	Experience of presenting at scientific meetings/workshops. Experience of working in a multidisciplinary environment.

		Experience of commercial data science or software development. Experience of acting as a principal investigator on research projects.
Behavioural Characteristics	A desire to learn about and collaborate on a wide range of projects. A high level of analytical ability and creativity in problem solving. Ability to develop and apply new concepts. Evidence of the ability to collaborate actively within the Institution and externally to complete research projects and advance thinking. Excellent written and verbal communication skills. Able to communicate complex and conceptual ideas to a range of groups. Commitment to meeting deadlines. Able to liaise with colleagues and to actively participate as a member of a research team. Willingness to engage with collaborators and travel as required. Willingness to attend and organise conferences and workshops. Willingness to engage in continuous professional development. Able to balance the pressures of research, administrative demands and competing deadlines.	Ability to communicate material of a technical nature to both technical and non-technical specialists. Able to identify sources of funding, generate income, obtain consultancy projects, or build relationships for future activities.

Terms & Conditions
Our Terms and Conditions of Employment can be viewed here.

Further Information
Please see our website for further information on working at the University of Exeter.