

THE POST

College/Service: College of Engineering, Mathematics and Physical Sciences

Post: Industrial Research Assistant / Associate / Fellow (ERDF)

Reference No: R57117

Grade: F

Reporting To: Director of the Institute for Data Science and Artificial Intelligence

Job Description

The post is available immediately until 28 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.

You 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. You 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.

You 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. You 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. You will work on specific, defined projects and Challenges with members of the University and commercial and industrial collaborators. You will also participate in and organise Challenge workshops for the co-creation of projects and the dissemination and deployment of the results.

You 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 (Industrial Research Assistant):

1. To support research activity under the direction of the principal investigator as appropriate to the research project. Responsibilities may include:
 - Undertaking a broad range of basic research activity according to the nature of the research project.
 - Maintaining databases, keeping accurate written and computerised records and ensuring data is stored securely and managed in accordance with the Data Protection Act;
 - Conducting literature and database searches as required;
 - Writing up the results of own research;
 - Contributing to the production of research reports and publications;
 - Presenting information on research progress and outcomes to bodies supervising research, e.g. steering groups, sponsors or members of research groups;
 - Assisting in the preparation of papers or reports for steering groups and other bodies;
 - Providing administrative support to the principal investigator and other project researchers as required;
 - Making use of standard research techniques and methods;
 - Analysing and interpreting the results of own research and generating original ideas based on outcomes
 - Contributing to the planning of future research projects
2. To liaise with members of the research team and other colleagues as appropriate to the research project.
3. To establish internal and external contacts to develop knowledge and understanding and form networks for future collaboration.
4. To plan own day-to-day research activity within the framework of the agreed programme of research and co-ordinate own work with that of others in the group to avoid conflict or duplication of effort.
5. To engage in continuous professional development and to be responsible for continually updating own knowledge and understanding in field of study or specialism and for developing own skills.

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.

Person Specification (Industrial Research Assistant)

Competency	Essential	Desirable
Attainments/Qualifications	Educated to first degree level in a related field of study or equivalent experience.	
Skills and Understanding	Possess sufficient breadth or depth of knowledge in the discipline and of research methods and techniques to work within own area.	
Prior Experience	Understanding of health and safety legislation.	
Behavioural Characteristics	Ability to maintain accurate records. Ability to organise and prioritise own research work within the project framework. Good written and verbal communication skills. Computer literate. Good analytical skills.	

	<p>Able to liaise with colleagues and students.</p> <p>Able to build contacts and participate in internal and external networks for the exchange of information and collaboration.</p> <p>Actively participate as a member of a research team.</p> <p>Engage in continuous professional development.</p> <p>Understand equal opportunity issues as they may impact on areas of research content.</p>	
Circumstances	Willing to work flexibly to achieve project demands.	

Main duties and accountabilities (Industrial Research Associate):

1. To undertake research as appropriate to the field of study including:
 - Writing up research work for publication;
 - Developing research objectives and proposals for own or joint research;
 - Dealing with problems which may affect the achievement of research objectives and deadlines;
 - Analysing and interpreting the results of own research and generating original ideas based on outcomes;
 - Using new research techniques and methods;
 - Using initiative and creativity to identify areas for research, developing new research methods and extending the research portfolio;
 - Using creativity to analyse and interpret research data and draw conclusions on the outcomes.
2. To work in collaboration with colleagues as appropriate to the field of study including:
 - Contributing to collaborative decision making within the research group;
 - Contributing to the production of collaborative research reports and publications.
 - Preparing papers and presenting information on research progress and outcomes to bodies supervising research, e.g. steering groups.
3. To communicate complex information, orally, in writing and electronically.
4. To contribute to the planning of research projects.
5. To use research resources, laboratories and workshops as appropriate and to take responsibility for reducing hazards and for the health and safety of others. Where appropriate, will also be responsible for conducting risk assessments.
6. To monitor research budgets as appropriate.
7. To engage in continuous professional development and to be responsible for continually updating knowledge and understanding in field of study or specialism and for developing skills.

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.

Person Specification (Industrial Research Associate):

Competency	Essential	Desirable
Attainments/Qualifications	PhD (or nearing completion) or equivalent qualification/experience in a related field of study.	
Skills and Understanding	Sufficient knowledge in the discipline and of research methods and techniques to work within established research programmes.	Evidence of research activity and published research.
Prior Experience	Understanding of health and safety legislation.	
Behavioural Characteristics	<p>Excellent written and verbal communication skills.</p> <p>Able to communicate material of a specialist or highly technical nature.</p> <p>Able to manage research and administrative activities and to balance the competing pressures of research and administrative demands and deadlines.</p> <p>Able to liaise with colleagues and students.</p> <p>Able to build contacts and participate in internal and external networks for the exchange of information and collaboration.</p> <p>Actively participate as a member of a research team.</p> <p>Engage in continuous professional development.</p> <p>Understand equal opportunity issues as they may impact on areas of research content.</p> <p>Where appropriate to the role, willingness to undergo training in order to conduct risk assessments</p>	
Circumstances	Willing to work flexibly to achieve project demands.	

Main duties and accountabilities (Industrial Research Fellow):

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.
 - 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.
4. To act as research team leader including:
 - Mentoring colleagues with less experience and advising on their professional development;
 - Coaching and supporting colleagues in developing their research techniques;
 - Supervising the work of others, for example in research teams or projects;
 - Developing productive working relationships with other members of staff;
 - Co-ordinating the work of colleagues to ensure equitable access to resources and facilities;
 - Dealing with standard problems and help colleagues to resolve their concerns about progress in research.
5. As determined by the nature of the project and at the direction of the PI, to plan, co-ordinate and implement research programme activity including:
 - Managing the use of research resources and ensuring that effective use is made of them;
 - Monitoring and reporting on the use of research budgets;
 - Helping to plan and implement commercial and consultancy activities;
 - Where appropriate, to plan and manage own consultancy assignments.

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.

Person Specification (Industrial Research Fellow):

Competency	Essential	Desirable
Attainments / Qualifications	PhD or equivalent in computer science, applied mathematics or a closely related field of study.	
Skills and Understanding	<p>A high level of proficiency in a high level computing language.</p> <p>Expertise in at least one of: machine learning and statistics; high performance computing for data science; data visualisation.</p> <p>A track record in academic publications commensurate with experience.</p> <p>Willing to learn the about new application domains.</p>	<p>Experience in cloud-based computing paradigms.</p> <p>Experience of high performance computing (CUDA/OpenMPI).</p> <p>Experience of creating software packages for wider community use.</p>
Prior Experience	Experience of managing research projects and research teams.	<p>Experience of presenting at scientific meetings/workshops.</p> <p>Experience of working in a multidisciplinary environment.</p> <p>Experience of commercial data science or software development.</p>
Behavioural Characteristics	<p>A desire to learn about and collaborate on a wide range of projects.</p> <p>A high level of analytical ability and creativity in problem solving.</p> <p>Ability to develop and apply new concepts.</p> <p>Evidence of the ability to collaborate actively within the Institution and externally to complete research projects and advance thinking.</p> <p>Excellent written and verbal communication skills.</p> <p>Able to communicate complex and conceptual ideas to a range of groups.</p> <p>Commitment to meeting deadlines.</p> <p>Able to liaise with colleagues and to actively participate as a member of a research team.</p> <p>Willingness to engage with collaborators and travel as required.</p> <p>Willingness to attend and organise conferences and workshops.</p> <p>Willingness to engage in continuous professional development.</p>	<p>Ability to communicate material of a technical nature to both technical and non-technical specialists.</p>

	Able to balance the pressures of research, administrative demands and competing deadlines.	
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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.