

# JOB DESCRIPTION

<b>Vacancy reference:</b>	SRF29011
<b>Post Title:</b>	Applied Meteorologist / Data Analyst
<b>Grade:</b>	Grade 6
<b>School/Department:</b>	Institute for Environmental Analytics (IEA)
<b>Reports to:</b>	Dr Jon Blower
<b>Responsible for:</b>	None initially

## Purpose

To apply expert knowledge of meteorology and data analysis to a range of user-focused projects at the Institute for Environmental Analytics (IEA).

## Main duties and responsibilities

- To make a strong contribution to the IEA's portfolio of application development projects by providing expertise in meteorology. The end users of these projects will be varied, including analysts, researchers, commercial decision-makers, policy-makers and the public. Specific tasks will include:
  - Sourcing appropriate meteorological and climate datasets, including observations (historical and real-time) and modelled products.
  - Configuring and running numerical weather models, in particular using limited-area models such as WRF and BRAMS.
  - Producing weather forecasts, nowcasts and hindcasts from a range of inputs, and verifying and validating these.
  - Analysing historical weather data (observations and simulations).
  
- To communicate effectively and professionally with end-users, other stakeholders (e.g. system administrators) and the wider community. Communication will take place through face-to-face meetings, remote tele- and videoconferencing and through written documentation. Examples of such communication will include:
  - understanding of user and market needs;
  - requirements gathering, analysis and refinement;
  - presentation of work, both orally (e.g. meetings, workshops and conferences) and in writing (e.g. papers and reports). This may involve explaining complex concepts clearly to specialists and non-specialists;
  - production of high-quality documentation for end users, developers and system administrators;
  - in some cases, provision of tailored training/consultancy to clients/end users and on-going support in dealing with any enquiries/queries regarding product after-care.
  
- To contribute to the design of future projects and applications for funding by providing expert input.

### **Supervision received**

This post will be supervised by Dr Jon Blower (CTO of the IEA), who will provide overall leadership and day-to-day support. Training will be available, subject to discussion.

### **Supervision given**

None initially

### **Contact**

You will work closely with colleagues at the IEA, which include consultants, software developers, data scientists, system administrators, environmental scientists and others. You will also work with other IEA partners (see <http://www.the-iea.org/about/partners/> for a full list). You may be asked to represent the IEA at technical meetings with both IEA partners and external customers. Frequent contact with the meteorological community (e.g. the Department of Meteorology at the University of Reading) will be useful to develop your knowledge and skills.

### **Terms and conditions**

There are no specified hours of work, but you will be required to work such hours as are necessary to carry out the duties associated with the post. Overtime is not payable. Some national and international travel will be required.

This document outlines the duties required for the time being of the post to indicate the level of responsibility. It is not a comprehensive or exhaustive list and the line manager may vary duties from time to time which do not change the general character of the job or the level of responsibility entailed.

**Date assessed: 9<sup>th</sup> February 2018**

# PERSON SPECIFICATION

Job Title	School/Department
Applied Meteorologist / Data Analyst	Institute for Environmental Analytics

Criteria	Essential	Desirable
<b>Skills Required</b>	<ul style="list-style-type: none"> <li>• Strong programming skills</li> <li>• Skills associated with analysis, manipulation and/or visualization of meteorological and/or climate data</li> <li>• Ability to work in Linux/UNIX environments</li> <li>• Strong interpersonal skills</li> <li>• Creative problem solving skills</li> <li>• Ability to communicate clearly to project partners and users, both in writing and orally</li> <li>• Ability to produce high-quality work to agreed deadlines</li> <li>• Ability to manage the demands of working on several projects simultaneously</li> </ul>	<ul style="list-style-type: none"> <li>• Strong programming skills in Python</li> <li>• Skills in handling data in different formats (binary and ASCII) including meteorological formats like NetCDF, GRIB and BUFR</li> <li>• Skills in handling data in databases</li> </ul>
<b>Attainment</b>	<ul style="list-style-type: none"> <li>• Postgraduate degree (or equivalent experience) in meteorology, climate science, oceanography or related field</li> </ul>	<ul style="list-style-type: none"> <li>• PhD (or equivalent experience) in meteorology, climate science, oceanography or related field</li> </ul>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Good working knowledge of descriptive and inferential statistics</li> <li>• Principles and applications of numerical weather prediction (NWP)</li> <li>• Knowledge of historical and real-time sources of meteorological observations</li> <li>• Verification and validation of forecasts</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of machine learning techniques</li> <li>• Knowledge of good software development practices such as requirements-gathering, version control, unit testing, design and documentation</li> </ul>
<b>Relevant Experience</b>	<ul style="list-style-type: none"> <li>• Experience of interacting with different kinds of clients and understanding their needs</li> <li>• Experience of reporting results in a clear and comprehensible manner</li> </ul>	<ul style="list-style-type: none"> <li>• Experience of configuring and running WRF and/or BRAMS</li> <li>• Experience of working in a commercial or operational environment, or in commercial project delivery.</li> <li>• Experience of product development or consultancy</li> </ul>

		<ul style="list-style-type: none"> <li>• Experience of handling large volumes of data</li> <li>• Experience of writing papers, reports or other significant documents for publication</li> <li>• Experience of project and/or team leadership</li> <li>• Experience of supervising junior staff</li> </ul>
<b>Disposition</b>	<ul style="list-style-type: none"> <li>• Strong interest in the application of meteorology to real-world problems</li> <li>• A focus on fulfilling user needs</li> <li>• Willingness to learn new skills on the job</li> <li>• Willingness to work both in a small team and as a self-motivated individual</li> </ul>	
<b>Other</b>	<ul style="list-style-type: none"> <li>• Willingness to travel, including occasional air travel</li> <li>• Willingness to present results at conferences, workshops, client meetings and in writing</li> </ul>	<ul style="list-style-type: none"> <li>• Foreign language skills</li> </ul>

Completed by: Dr Jon Blower	Date: 9 <sup>th</sup> Feb 2018
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