UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Weather Radar Data Software Engineer

National Centre for Atmospheric Science

Salary: Grade 6 (£27,511 – £32,817, pro rata)

Reference: ENVEE1371

Closing date: 11 December 2019

Part time (0.5 FTE), fixed term for 16 months, to start as soon as possible

We will consider job share / flexible working arrangements

Weather Radar Data Software Engineer
National Centre for Atmospheric Science (NCAS)

Are you interested in using your extensive technical computing and software development skills in an innovative environmental research team? Are you enthusiastic and ambitious with a desire to be part of an interdisciplinary team delivering world-leading research that aims to help improve our understanding of the planet and help the public?

An exciting opportunity exists for someone with a software engineering/computer science background to work within the National Centre for Atmospheric Science's (NCAS) Weather Radar Group at the University of Leeds. Our group makes extensive use of weather radars (which measure rain and clouds as well as insects and birds) to help improve our understanding of the environment.

The role does not require knowledge of weather radar or atmospheric science, however you will need to be comfortable working with large datasets (10s of terabytes) and high-performance computing facilities. You will work collaboratively with current team members who have extensive scientific knowledge but need your advanced technical skills to efficiently accomplish the team's goals. Specifically, the work will include (a) the development of a suite of software to help the team process our observations on a supercomputer, (b) the implementation of a state-of-the-art set of radar simulation algorithms on a local high-performance GPU driven workstation and, (c) the deployment of a publicly facing interactive web-based data portal.

Day-to-day you will use your scientific and technical expertise to implement a programme of continuous technical improvement in order to enhance our use of computing, and in particular the use of our super-computing facilities. You will use your knowledge to ensure the software is maintained and developed effectively, ultimately improving the timeliness, quality and accuracy of our radar products. Collaborating with the team to exploit and utilise the latest scientific advances in radar meteorology, you will set the standard for code development in our team. You will also provide informal training to colleagues in the team and offer expert advice to those using the software you develop.



What does the role entail?

As Weather Radar Data Software Engineer your main duties will include:

- Contributing to the development, implementation, testing and documentation a of suite of software that transforms radar observations into the input required to test various hydrological models. This work will be supported by the radar experts in our existing team and the goal will be to create an efficient work flow that utilises our super-computing facilities;
- Contributing to implementing, testing and documenting a suite of software that creates an efficient work flow for simulating the radar signature of arbitrary objects (including hydrometeors and bio-meteors) and create data files that can be directly compared to observations from the various NCAS radars;
- Contributing to the development and implementation of a chain of code which will apply the machine learning algorithms developed within the group on archived radar observations from the UK Met Office;
- Contributing to the planning and implementation of projects to progress the use of the latest computing and programming in the team's work;
- Working with others to set standards for configuration management, code review, release management, testing and coding style;
- Delivering informal technical training to others in the team.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As Weather Radar Data Software Engineer you will have:

- A degree or equivalent qualification, in a computer/physical science subject, or equivalent professional experience;
- Proven experience in programming, processing "Big Data" and high-performance computing;
- Demonstrable ability to design, write and understand complex code in Python and a Linux environment;
- Experience of working effectively with others;
- Excellent communication skills and a demonstrable capability to communicate technical information to non-specialists, verbally and in writing;

- Ability to produce a good quality plan and technical implementation of a software concept;
- Ability to use a Git based version control repository or similar software development platform;
- Ability to be pro-active, to work on own initiative and to adopt a flexible approach to achieving work outputs when required;
- Willingness to travel between NCAS sites and project locations.

You may also have:

- An understanding of the principles of remote sensing, basic meteorology and or hydrology;
- Experience with NERC's JASMIN (http://www.jasmin.ac.uk).

How to apply

You can apply for this role online; more guidance can be found on our How to Apply information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

To explore the post further or for any queries you may have, please contact:
Dr Ryan Neely
Email: ryan.neely@ncas.ac.uk

Additional information

Find out more about the National Centre for Atmospheric Science

Find out more about the Faculty of Environment

Find out more about Athena Swan in the Faculty



Candidates with disabilities
Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our Accessibility information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974
A criminal record check is not required for this position, however, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be, in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our Criminal Records information.