VACANCY NOTICE
SCIENTIFIC SOFTWARE ENGINEER

Applications are invited for a highly motivated Scientific Software Engineer to join the team at the Montserrat Volcano Observatory (MVO) on a contractual basis. The post includes the development and maintenance of real-time data acquisition and processing systems for the detection and reporting of phenomena related to the behaviour of the Soufrière Hills Volcano. The applicant should be experienced in a range of computer technologies, possess excellent communication skills and be strongly results oriented.

CONTEXT:

The MVO is the organisation responsible for monitoring the Soufrière Hills Volcano located on the island of Montserrat in the Eastern Caribbean. The volcano is monitored using an extensive network of instruments deployed on and around the volcano. This data must be transmitted to the observatory, archived, processed, analysed and reported. Your primary job will be to provide the software support necessary to make these things happen.

Job Purpose:

Provide computer systems design, development, support and consultation on new and existing data collection, processing, analysis and reporting systems, including intranet and internet Web sites and Relational Database Management Systems (RDBMS).

Job outline:

- Collaborate with local and visiting scientists and engineers to design systems to collect, store, process, analyse and disseminate local and remotely telemetered data.
- Design and implement data structures to store data efficiently using methods such as delimited files and RDBMS.
- Develop batch and interactive programs in multiple languages such as C, Perl, Python and PHP.
- Maintain and troubleshoot existing computer systems on multiple platforms, mainly Microsoft Windows and Linux.
- Develop, maintain and troubleshoot external/internet MVO's Web site, support staff with content management.
- Provide ad hoc reporting, design, management and maintenance of RDBMS systems.
- Interact with Government of Montserrat system administrators to manage network, file systems and servers.
- Monitor systems to minimize downtime of Web sites and data collection processes.
- Develop systems to analyse and transform digital imagery and video, including optimal compression.

- Perform Geographical Information System (GIS) conversion between coordinate reference systems and perform various data manipulation.
- Develop software for data analysis as well as user-friendly interfaces for existing codes.
- Maintain the web-based tool for displaying volcano monitoring data sets using Linux and MATLAB scripts.
- Assist in maintenance of seismic data-acquisition system.
- Undertake support and maintenance of software products.
- Develop and implement automation of procedures for seismic, GPS, thermal infrared and other geophysical data.
- Interact with software system users in the observatory to gather details on existing bugs and desirable upgrades
- Produce functional specifications and designs in response to requirements for changes to software products or for new and custom developments.
- Develop and test software products to meet agreed requirements.
- Document any developed software or processes.
- Occasional cover for the Operations room
- Other duties, as assigned.

Qualifications and Experience:

- A first degree with a major in Computer Sciences or related field plus at least three years of experience. A postgraduate degree in Computer Science would be an asset. Must demonstrate active computer systems design, development and maintenance experience. Exceptional candidates who are not graduates, but who have extensive experience in these areas will be considered.
- Demonstrated experience in system administration on both Windows and Linux systems
- Preferably experienced in digital image and video translation and compression techniques.
- Preferably experienced in Geographical Information Systems software such as GDAL, OGR, ESRI ArcGIS, Proj, vector and raster file formats and coordinate references systems and projections.
- Strong skills: C++ and Java (Swing and Applets).
- Experience in: CSS, HTML, including Web Server applications
- Intermediate skills: Perl, Python and JavaScript
- Optional skills: MATLAB, Fortran and C.
- Familiarity with Earthworm, Seisan and SeisComP would be an asset
- Experience in computer networking.
- RDBMS design and maintenance.

Personal Qualities:

- Excellent communication (spoken and written English) and interpersonal skills
- Ability to work with people from a variety of backgrounds
- Ability to work autonomously
- Self-motivated
- Flexibility: willingness to work outside of standard hours to address urgent situations and to assist outside of core responsibilities when needed.
- Relish new challenges
- Results oriented
- Physically capable to perform work in the field when necessary

Annual compensation:

- EC$135,171 – EC$155,169 (commensurate with experience).

Benefits:

- Group life and health insurance schemes upon successful completion of probationary employment
- Special Duty Allowance
- Travel allowance
- Acting Allowance
- Meal allowance
- Non-monetary benefits in respect of telephone packages and uniforms/work wear.

Relocation Expenses:

Assistance with relocation and travel expenses will be provided to the successful candidate if needed.

Application:

Candidates should submit a full curriculum vitae, including the names and addresses of two referees, and a covering letter outlining their experience. The deadline is 30th September, 2026. Applications should be sent to:

The Operations Manager
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