

Job Description for Professional Posts

Reference: NA2024/06

Position and Grade:	Associate Data Scientist (Radiometrics), P2
Organizational Unit:	Radiometrics Laboratory Division of IAEA Marine Environment Laboratories
Duty Station:	Monaco
Type/Duration of Appointment:	FT – JPO, 1 year with possibility of extension

Organizational Setting

The Department of Nuclear Sciences and Applications implements the IAEA's Major Programme 2, "Nuclear Techniques for Development and Environmental Protection". This Major Programme comprises individual programmes on food and agriculture, human health, water resources, environment and radiation technologies. These programmes are supported by laboratories in Seibersdorf, Monaco and Vienna. The Major Programme's objective is to enhance the capacity of Member States to meet basic human needs and to assess and manage the marine and terrestrial environments through the use of nuclear and isotopic techniques in sustainable development programmes.

The IAEA Marine Environment Laboratories consists of three laboratories, which are located in Monaco. The Division supports Member States in enhancing their capacity to use nuclear and isotopic techniques to understand marine and atmospheric environmental processes and dynamics, and to identify and address environmental problems caused by radioactive and non-radioactive pollutants and climate change.

The Radiometrics Laboratory has expertise in the fields of marine radioactivity measurements, development of radioanalytical methods, low-level counting, modelling of dispersion, environmental and radiological assessments, marine database management, and radiotracer applications in oceanographic, pollution and climate studies. It collaborates with Member States to assist them in their development and to implement capacity building technical cooperation projects. It also helps them to prepare for emergency situations, carries out missions at sea, supports analytical quality in Member States laboratories and provides training.

Main Purpose

To contribute to the development of data and information systems supporting research and other activities across the Radiometrics Laboratory's (RML) work programme including MARIS, LIMS and software for statistically evaluating measurement data for reference material characterisation., proficiency tests and interlaboratory comparisons.

Role

Under supervision of the Head of the Radiometrics Laboratory, the Associate Data Scientist (Radiometrics) is: (1) a technical specialist providing technical insight and gathering and analysing requirements to substantially progress the development of key aspects RML's data and information systems, (2) an analyst developing code for data analysis and visualisation, and (3) a communicator preparing and presenting results through technical reports and scientific publications.

Partnerships

The Associate Data Scientist (Radiometrics) builds and maintains collaborations with colleagues in RML. He/she builds relationships with colleagues working in other sections of the Division of Marine Environment Laboratories and divisions of the Department of Nuclear Sciences and Applications, and other departments. The incumbent also networks with scientists and data curators from Member State laboratories facilitating information exchange on relevant data and information systems.

Functions / Key Results Expected

- Gather and analyse requirements for RML data and information systems development.
- Design, develop, test and deploy software based on these requirements.
- Maintain existing codebases.
- Contribute to the development of a strategy to ensure effective and sustainable long-term support of these information systems.
- Contribute to handling, storage and analysis of data.
- Contribute to improvement of processes for wrangling and cleaning data.
- Acquire knowledge of RML's activities and objectives and suggest ideas for further improvement and evolution of these information systems accordingly.
- Provide technical input for the design of data modelling processes, creation of algorithms and of predictive models.
- Collaborate in drafting technical publications and training material.

Core Competencies				
Competence	Occupational Role	Behavioural Indicator		
Communication	Individual Contributor	Communicates orally and in writing in a clear, concise and impartial manner. Takes time to listen and understand the perspective of others and proposes solutions.		
Achieving Results	Individual Contributor	Takes initiative in defining realistic outputs and clarifying roles, responsibilities and expected results in the context of the Department/Division's programme. Evaluates his/her results realistically, drawing conclusions from lessons learned.		
Teamwork	Individual Contributor	Actively contributes to achieving team results. Supports team decisions.		
Planning and Organizing	Individual Contributor	Plans and organizes his/her own work in support of achieving the team or Section's priorities. Takes into account potential changes and proposes contingency plans.		

Competencies and Expertise (do not revise or edit)

Functional Competencies			
Competence	Occupational Role	Behavioural Indicator	
Analytical thinking	Associate	Gathers and analyses information, identifying critical relationships and patterns among data and proposes workable solutions.	
Knowledge sharing and learning	Associate	Actively seeks opportunities to learn by formal and informal means; learns from others, adopting and sharing best practice.	
Technical/scientific credibility	Associate	Acquires and applies new skills to remain up to date in his/her area of expertise. Reliably applies knowledge of basic technical/scientific methods and concepts.	
Commitment to continuous process improvement;	Associate	Identifies opportunities for process, system and structural improvement as well as improving current practices, increasing effectiveness and achieving efficiency gains.	
		Actively supports the application of sound quality management standards and process improvement.	

Expertise		
Expertise	Description	
Computer Programming	Experience and knowledge of coding and scripting using common technologies such as Python	
Data Analysis	Broad data science skills including statistical methods, scientific programming and visualisation of data	
Geographic Information System	Proficiency in developing and verifying spatial data sets and in preparing digital maps	
Environmental radioactivity	Knowledge of measurement techniques	

Education, Experience and Language Skills

- University degree in computer science, physics, maths or a related field.
- Minimum of two years' experience in development of scientific software and/or data science.
- Knowledge of environmental radioactivity, radioactivity measurement techniques, computer modelling highly desirable.

- Experience of any LIMS (Laboratory Information Management Systems) and the ISO/IEC 17025 standard for Testing and calibration laboratories highly desirable.
- Excellent oral and written command of English. Knowledge of other official IAEA languages (Arabic, Chinese, French, Russian and Spanish) is an asset.