

Job Description for Professional Posts

Reference:NA2024/54

Position and Grade:	Associate Data Analyst (Scientist), P2
Organizational Unit:	Nuclear Medicine and Diagnostic Imaging Section Division of Human Health
Duty Station:	Vienna
Type/Duration of Appointment:	FT – JPO, 1 year

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 Division of Human Health is organized into four sections whose objectives are to enhance the capabilities of Member States to address needs related to the prevention, diagnosis and treatment of health problems through the development and application of nuclear techniques within a framework of quality assurance.

The Nuclear Medicine and Diagnostic Imaging Section's primary objective is to enhance Member States' capabilities to use nuclear medicine and other imaging technologies efficiently, mainly, but not limited to cancer and cardiac diseases, and for undertaking related basic and clinical research. To achieve those goals, special attention is given to the preparation of educational resources, guidelines and guidance documents.

Main Purpose

As a member of the Nuclear Medicine and Diagnostic Imaging Section team led by the Section Head, the Associate Data Analyst (Scientist) contributes to design data modelling processes, creating algorithms and predictive models for the implementation of the radiomics and artificial intelligence component of the Zoonotic Disease Integrated Action Project (Zodiac). He / she will work with big data including DICOM images and contributes to data mining, cleaning, and analysis, and collaborate in drafting technical publications in the field of radiomics and allied disciplines as applied to evaluation of patients with prevalent or emerging zoonotic diseases.

Role

The Associate Data Analyst (Scientist) is: (i) a technical contributor to NMDI research activities devoted to the radiomics and artificial intelligence component of Zodiac Pillar 4; (ii) a collaborator for designing data modelling processes and creating algorithms and predictive models; (iii) a contributor to the design of data storage; (iv) a contributor to management, and analysis, of data collected as part of the radiomics component of Zodiac pillar 4a drafter of scientific publications and technical

documents; (v) a contributor to the cost-effectiveness analysis of NMDI Zodiac activities in particular clinical research.

Partnerships

The Associate Data Analyst (Scientist) maintains collaborative relationships with colleagues in the section and with other IAEA professionals, including staff working in other sections of the Division of Human Health and divisions of the Department of Nuclear Sciences and Applications, and other departments. He/she interact with mathematicians, IT experts, data curators as well as nuclear medicine and radiology professionals in Member States.

Functions / Key Results Expected

- Provide technical input for the design of data modelling processes, creation of algorithms and of predictive models.
- Contribute to handling, storage and analysis of big data including DICOM images.
- Contribute to data mining, cleaning, and analysis.
- Collaborate in drafting technical publications in the field of radiomics and allied disciplines.

Competencies and Expertise **(do not revise or edit)**

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.

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Functional Competencies		
Competence	Occupational Role	Behavioural Indicator
Knowledge sharing and learning	Associate	Actively seeks opportunities to learn by formal and informal means; learns from others, adopting and sharing best practice.
Judgement / decision making	Associate	Consults with supervisor/manager and makes decisions in full compliance with the Agency's regulations and rules.

Expertise	
Expertise	Description
Clinical Epidemiology	Knowledge of and experience in acquiring, compiling, synthesizing, extracting and reporting information.
Biostatistics and Biometry	Experience in designing statistical analysis plans, and performing data analysis.
Clinical Practice	Proven clinical experience in patient management.
Health Economics	Knowledge of efficiency, effectiveness, value and behaviour in the production and consumption of health and healthcare.

Education, Experience and Language Skills

- University degree in mathematics, computer science or statistics.
- Minimum of two years of related working experience in data mining, data warehousing, maths, statistics and data visualization.
- Data-driven skills such as analytics, machine learning and artificial intelligence.
- Experience in performing statistical analyses using tools such as SQL.
- Knowledge of programming languages such as R, Python and SAS, and visualization tools like Power BI and Tableau.
- Communication skills to develop and convey findings.
- Excellent oral and written command of English. Knowledge of other official IAEA languages (Arabic, Chinese, French, Russian and Spanish).

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