



International Civil Aviation Organization

Job Description [Applicable solely to secondment]

POSITION INFORMATION

Post Title:	Artificial Intelligence (AI) Developer, ICT	Duration of Secondment:	
Grade Level:	P-3	Deadline for applications:	
Duty Station:	Montréal, Canada	Date for entry on duty:	As soon as possible
Special Notice: The ICAO Assembly recently reaffirmed its commitment to enhancing gender equality and the advancement of women by supporting UN Sustainable Development Goal 5 “ Achieve gender equality and empower all women and girls. ”			

THE ORGANIZATIONAL SETTING

The International Civil Aviation Organization (ICAO) sets international Standards and Recommended Practices (SARPs) for aviation safety, air navigation, security and environmental protection. To that effect, ICAO is a knowledge-based organization engaged in the development of intellectual property.

The Bureau of Administration and Services (ADB) plays a lead role in the effective and efficient administrative management of the Organization by ensuring the provision of high-quality physical and human resources, by applying the highest standards of work ethics and conduct, and by using results based management skills and tools to support the Organization in implementing its Strategic Objectives, in order to serve all stakeholders of the world aviation community.

The Information Management Services (IMS) Division falls under the auspices of the Bureau of Administration and Services (ADB) and is headed by the Deputy Director, IMS (DD/IMS) who has responsibility for planning, developing and implementing an information management strategy, setting and enforcing common ICT standards throughout the Organization.

The Information and Communication Technology (ICT) Section, under the management of the Chief, ICT Section (C/ICT), reports directly to the DD/IMS and is a service provider, which plans, acquires or develops and manages the organization’s enterprise applications and systems. Key activities of the Section include the establishment of core infrastructure and network services; software development and support for enterprise applications; Enterprise Architecture and Project Management; Enterprise Resource Planning (ERP) system support, Web management as well as Regional Offices support.

The incumbent reports directly to the Chief, ICT Section in the Information Management Services (IMS) Division under the Bureau of Administration and Services (ADB) who will assign day-to-day activities to the incumbent, set priorities, assess his/her performance and provide support and coaching.

MAJOR DUTIES AND RESPONSIBILITIES

Function 1 (incl. Expected results)

Leads AI solution design, development & optimization, achieving results such as:

- Lead the design and development of end-to-end AI and machine-learning solutions supporting automation, predictive analytics, natural language processing, and generative AI use cases.
- Assess and validate solution feasibility; provide authoritative recommendations regarding model architecture, algorithms, data strategies, and performance optimization.
- Oversee advanced data preprocessing, feature engineering, and model lifecycle management.
- Develop reusable AI components, pipelines, and frameworks to accelerate enterprise adoption.
- Produce and maintain comprehensive technical documentation including architectural models, algorithm specifications, and evaluation methodologies.

Function 2 (incl. Expected results)

Leads AI architecture & system integration, achieving results such as:

- Design scalable, secure AI architectures aligned with ICAO ICT policies, enterprise architecture, and industry best practices.
- Lead integration of AI services with enterprise applications, databases, CRM systems, and cloud-based infrastructure.
- Ensure AI systems meet interoperability, data governance, security, and compliance requirements.
- Oversee technical coordination with internal teams and external service providers for system configuration and integration tasks.
- Provide guidance on user experience requirements for AI-enabled interfaces and applications.

Function 3 (incl. Expected results)

Leads solution delivery, deployment & quality assurance, achieving results such as:

- Oversee the technical delivery of AI solutions through design, development, testing, and production deployment phases.
- Lead code reviews, quality checks, risk mitigation, and adherence to architectural, security, and coding standards.
- Manage the operationalization of AI/ML models including monitoring, retraining strategies, performance evaluation, and incident resolution.
- Conduct readiness assessments and review technical deliverables for acceptance.
- Ensure AI solutions meet project milestones, performance KPIs, and organizational quality benchmarks.

Function 4 (incl. Expected results)

Supports project leadership & stakeholder engagement, achieving results such as:

- Provide expert technical advice to project managers, business owners, and decision-makers.
- Lead technical discussions, feasibility assessments, and solution option analyses for AI initiatives.
- Contribute to project planning, estimation, resource requirements, and risk identification.
- Facilitate stakeholder alignment through presentations, workshops, and technical briefings.
- Ensure AI development activities support ICAO's strategic objectives and digital transformation roadmap.

Function 5 (incl. Expected results)

Leads AI governance, ethical AI, and sustainability practices, achieving results such as:

- Promote responsible and ethical use of AI in line with UN values and global standards.
- Oversee documentation and traceability of training datasets, model decisions, metadata, and auditing requirements.
- Identify and mitigate issues related to data quality, model drift, systemic bias, and cross-system dependency risks.
- Guide teams on reusable design patterns and long-term sustainability of AI solutions.
- Provide higher-level technical support for escalated AI incidents and contribute to continuous improvement practices.

Function 6 (incl. Expected results)

Performs other related duties, as assigned.

IMPACT OF THE OUTCOME OF THE POSITION

The Artificial Intelligence Developer is essential to the effective design, development, and implementation of a comprehensive AI architecture and strategy across the organization. Successful execution of this role will greatly enhance the Organisation's operations, advance its strategic objectives, and improve the efficiency and reliability of ICAO systems through artificial intelligence. This position is critical to the success of AI deployment at ICAO and contributes significantly to related and interdependent initiatives.

WORK RELATIONS AND CONTACTS

Reporting to the Chief, ICT Section, the incumbent will be working in a team environment with business and technical resources, as well as third party vendors on the Artificial Intelligence projects and possibly other projects throughout different areas of the organization. The incumbent will also work with IT developers, business owners, project managers and end users. The incumbent will present to senior management.

QUALIFICATIONS AND EXPERIENCE

Education

Essential

- An advanced-level university degree (Master's degree or academic equivalent) in artificial intelligence, data science, computer science, information technology, or a related field is required. A first-level university degree in combination with two additional years of qualifying experience in artificial intelligence, data science, computer science, information technology, or a related field, may be accepted in lieu of the advanced university degree.
- Professional training or certification in machine learning, AI engineering, or data science.

Desirable

- Certification in cloud-based AI platforms (Azure, AWS, Google Cloud).
- ITIL certification.
- Certification in advanced data visualization or analytics tools.

Professional experience

Essential

- A minimum of five (5) years of experience (including at least two at the international level) in developing and deploying AI/ML solutions.
- Demonstrated experience building, training, and optimizing machine-learning models using frameworks such as TensorFlow, PyTorch, Scikit-Learn, spaCy, or equivalent.
- Experience designing AI system architectures and integrating AI services with enterprise applications.
- Experience leading technical development activities—code reviews, solution design, testing, and pipeline deployment. Experience working in complex organizational environments, preferably in an international or public-sector context

Desirable

- Experience with natural language processing, generative AI, or computer vision.
- Experience with MLOps, CI/CD pipelines, and cloud-native AI deployments.
- Experience supporting digital transformation initiatives in large organizations.

Languages

Essential

- Fluent reading, writing and speaking abilities in English.

Desirable

- A working knowledge of any other language of the Organization (Arabic, Chinese, French, Russian, Spanish).

Competencies

Professionalism: Shows pride in work and in achievements; demonstrates professional competence and mastery of subject matter; is conscientious and efficient in meeting commitments, observing deadlines and achieving results; is motivated by professional rather than personal concerns; shows persistence when faced with difficult problems or challenges; remains calm in stressful situations. Takes responsibility for incorporating gender perspectives and ensuring the equal participation of women and men in all areas of work.

Teamwork: Works collaboratively with colleagues to achieve organizational goals; solicits input by genuinely valuing others' ideas and expertise; is willing to learn from others; places team agenda before personal agenda; supports and acts in accordance with final group decision, even when such decisions may not entirely reflect own position; shares credit for team accomplishments and accepts joint responsibility for team shortcomings.

Communication: Speaks and writes clearly and effectively; listens to others, correctly interprets messages from others and responds appropriately; asks questions to clarify, and exhibits interest in having two-way communication; tailors language, tone, style, and format to match the audience; demonstrates openness in sharing information and keeping people informed.

Planning and Organizing: Develops clear goals that are consistent with agreed strategies; identifies priority activities and assignments; adjusts priorities as required; allocates appropriate amount of time and resources for completing work; foresees risks and allows for contingencies when planning; monitors and adjusts plans and actions as necessary; uses time efficiently.

Accountability: Takes ownership of all responsibilities and honours commitments; delivers outputs for which one has responsibility within prescribed time, cost and quality standards; operates in compliance with organizational regulations and rules; supports

subordinates, provides oversight and takes responsibility for delegated assignments; takes personal responsibility for his/her own shortcomings and those of the work unit, where applicable.

Technological Awareness: Keeps abreast of available technology; understands applicability and limitations of technology to the work of the office; actively seeks to apply technology to appropriate tasks; shows willingness to learn new technology.

MODE OF SECONDMENT

The duration of the secondment is XXX, which can be extended for an additional XXX and thereafter, depending on need for the subject matter expert. The secondee is expected to work five days per week.

ICAO may avail itself of the services of personnel seconded by governments, other international agencies or educational, scientific, research or other institutions. Seconded personnel are engaged under a Trusted Funded or Gratis (detached expert) arrangement, in accordance with terms and conditions stipulated in a Memorandum of Understanding between ICAO and sponsor of the seconded person. During the period of assignment with ICAO the seconded individual will be considered an "Official" of ICAO.

Once engaged by ICAO the seconded individual will be under the sole authority of the Secretary General of ICAO and all relationship with the releasing Government/Agency will be held in abeyance during the period of employment with ICAO.

As detached expert: The individual is detached from the releasing government/Agency but is assigned to work for ICAO.

Trust Fund arrangement: Funds are deposited by the Government/Agency with ICAO for the purpose of engaging personnel normally subject to the stipulations of a Memorandum of Understanding.

NOTICE TO CANDIDATES

ICAO does NOT charge any fees or request money from candidates at any stage of the selection process, nor does it concern itself with bank account details of applicants. Requests of this nature allegedly made on behalf of ICAO are fraudulent and should be disregarded.