TERMS OF REFERENCE

UNAIDS - Republic of Korea Fellowship Programme - Seoul National University

General Information	
Title/Description	**Fellow – Conversational AI and Data Access**
Assignment Dates	6 months – March 2027
Duty Station	Bonn, Germany or Geneva, Switzerland (hybrid/remote possible)
Department /Unit	Digital & Technology Solutions (DTS)
Name of Supervisor	Michael MALDONY - Director, Digital & Technology Solutions, a.i. (or designate)

Background and Context

UNAIDS supports the global effort to end AIDS as a public health threat by 2030. As part of this role, UNAIDS manages globally significant HIV-related datasets that underpin monitoring, accountability, and decision-making at global, regional, and country levels. These datasets are primarily accessed today through dashboards and web portals, which can be difficult to navigate for non-technical users and limit exploratory analysis.

Recent advances in AI-enabled conversational interfaces and the emergence of the Model Context Protocol (MCP) provide an opportunity to make UNAIDS data more approachable, intuitive, and accessible. By enabling users to interact with datasets through natural language (e.g. chat-based interfaces), UNAIDS can significantly lower barriers to data use while maintaining appropriate governance, security, and data protection controls.

UNAIDS' core data infrastructure is hosted on Microsoft Azure, providing a solid foundation for experimentation with conversational AI, virtual agents, and secure data access layers. As part of its broader data and digital strategy, UNAIDS wishes to explore and prototype MCP or similar emerging protocols and approaches that allow users to "talk to the data" in plain language, rather than relying solely on static dashboards or complex query tools.

Purpose of the Fellowship

The purpose of this Fellowship is to provide hands-on technical support to design and implement proof-of-concept (PoC) solutions that demonstrate how MCP and conversational AI technologies can be used as a secure, governed layer over UNAIDS datasets.

The Fellowship is exploratory and practical in nature, focusing on working prototypes rather than production deployment. The outputs will inform future architectural and investment decisions on AI-enabled data access at UNAIDS.

The role is designed for early-career candidates and emphasizes learning through hands-on prototyping.

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Scope of Work and Key Responsibilities

Under the guidance of DTS technical leads, the Fellow will undertake the following responsibilities:

1. MCP and Conversational AI Exploration

- Analyse the Model Context Protocol (MCP) and/or similar emerging approaches for connecting large language models to structured data sources.
- Analyse the Model Context Protocol (MCP) and its applicability to UNAIDS data environments.
- Identify suitable patterns for exposing structured datasets to large language models via MCP or similar emerging approaches.
- Assess strengths, limitations, and risks of MCP-based or similar approaches in a UN data context.

2. Proof-of-Concept Design and Implementation

- Explore one or more proof-of-concept conversational interfaces enabling natural-language interaction with selected UNAIDS datasets.
- Under guidance from DTS colleagues, configure MCP servers/connectors or equivalent middleware to mediate access between AI models and underlying data sources.
- Ensure solutions are compatible with UNAIDS' Azure-based data infrastructure.

3. Virtual Agent and User Interaction Design

- Implement a simple chat-based user interface for interacting with the data.
- Enable common user interactions such as querying indicators, filtering by country or year, and basic analytical questions.
- Focus on usability for non-technical users.

4. Governance, Security, and Responsible AI Considerations

- Support the implementation of basic safeguards related to data access, authentication, and authorization, in collaboration with DTS technical teams.
- Ensure the PoC respects UNAIDS data protection, confidentiality, and responsible AI principles.
- Clearly document limitations and risks (e.g. hallucinations, misinterpretation of data).

5. Documentation and Knowledge Transfer

- Document the PoC architecture, components, and data flows.
- Provide clear setup and usage documentation to enable replication or further development by DTS.
- Capture lessons learned and recommendations for scaling or future pilots.

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The Fellow will work closely with relevant program teams, data owners, data stewards, digital/IT colleagues, and other internal stakeholders. The Fellow may also collaborate with selected external partners, when appropriate.

Deliverables

- One or more minimum viable proof-of-concept conversational agents enabling natural-language access to selected UNAIDS datasets.
- An MCP-based (or equivalent) integration layer connecting AI models to Azure-hosted data sources.
- Source code and configuration files for all PoC components.
- Technical architecture and data-flow diagrams
- A short technical brief summarizing findings, risks, and recommendations for next steps
- A demonstration (live or recorded) of the PoC.

All deliverables will be handed over with source code, documentation, and clear usage instructions (as appropriate).

Required Qualifications and Experience

Education

- University degree in Computer Science, Data Science, Artificial Intelligence, Software Engineering, or a related technical field.

Desirable Experience

- Academic or practical experience with AI, machine learning, or natural-language processing.
- Knowledge of chatbots, virtual agents, or conversational interfaces (academic, internship, or project-based experience acceptable).
- Familiarity with cloud platforms, preferably Microsoft Azure.
- Experience working with structured data (e.g. SQL databases, data warehouses).

Technical Skills

- Programming skills in at least one relevant language (e.g. Python, JavaScript/TypeScript).
- Basic understanding of large language models and prompt-based interaction.
- Basic experience with APIs and service integration (coursework or project-based acceptable).

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- Familiarity using appropriate tools, frameworks, and services (e.g. Azure OpenAI, open-source frameworks, or equivalent).
- Exposure to Git, version control, or collaborative software development practices is an asset.

Languages

- **Essential:** Proficiency in English.
- **Desirable:** Working knowledge of another UN official language.

Competencies

- Curiosity and strong interest in applied AI and emerging technologies
- Ability to prototype and iterate quickly.
- Strong problem-solving and analytical skills
- Ability to explain technical concepts clearly to non-technical audiences.
- Sensitivity to data confidentiality, ethics, and institutional accountability

The selected Fellow will be expected to follow applicable UNAIDS policies and procedures regarding confidentiality, information security, data protection, records management, and ethical standards of conduct.

Duration and Working Arrangements

The Fellowship is expected to last 3–6 months, with a clear PoC work plan and agreed-upon milestones at the start. The Fellow will work closely with DTS data, application, and security team colleagues.

Expected Impact

This Fellowship will help UNAIDS assess the feasibility and advantages of conversational, AI-driven access to HIV data, providing concrete evidence to guide future investments in user-friendly, responsible, and innovative data access approaches.

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