

February 2024

Title: Machine Learning Intern

Bureau/Dept/Unit: TSB/ TSP

Supervision: Thomas Basikolo / Programme Officer

Duration: 11 months maximum

Location: ITU Headquarter/

ITU is the United Nations specialized agency for information and communication technologies – ICTs.

We allocate global radio spectrum and satellite orbits, develop the technical standards that ensure networks and technologies seamlessly interconnect, and strive to improve access to ICTs to underserved communities worldwide.

ITU is committed to connecting all the world's people – wherever they live and whatever their means. Through our work, we protect and support everyone's fundamental right to communicate.

Today, ICTs underpin everything we do. They help manage and control emergency services, water supplies, power networks and food distribution chains. They support health care, education, government services, financial markets, transportation systems, e-commerce platforms and environmental management. And they allow people to communicate with colleagues, friends and family anytime, and almost anywhere.

With the help of our global membership, ITU brings the benefits of modern communication technologies to people everywhere in an efficient, safe, easy and affordable manner.

ITU membership reads like a Who's Who of the ICT sector. We're unique among UN agencies in having both public and private sector membership. So in addition to our 193 Member States, ITU membership includes ICT regulators, many leading academic institutions and some 700 tech companies.

In an increasingly interconnected world, ITU is the single global organization embracing all players in this dynamic and fast-growing sector.

1. **Organizational Unit**:

The Telecommunication Standardization Bureau (TSB) fulfills the objectives of the Union relating to telecommunication standardization, by providing secretariat support to groups studying technical, operating and tariff questions and facilitating the adoption of Recommendations in these areas with a view to standardizing telecommunications and information technology on a global basis. In order to achieve these objectives, the Telecommunication Standardization Bureau works in accordance with the instructions of the World Telecommunication Standardization Assemblies (WTSA), Telecommunication Standardization Study Groups and the Telecommunication Standardization Advisory Group. TSB, headed by an elected Director, provides the technical, administrative and logistic support for the assemblies and for the meetings of the groups mentioned.

Within the Telecommunication Standardization Bureau (TSB), the Telecommunication

Standardization Policy Department (TSP) is responsible for the policies guiding ITU-T and the

maintenance of its relevant position in the global standardization arena. It oversees the

implementation of the WTSA Action Plan, and is responsible for identifying emerging

technologies and analysing technology trends in order to advise membership on emerging

standardization developments.

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| 1. **Organizational context:** |

The Telecommunication Standardization Policy Department (TSP) is responsible for the Machine Learning initiatives such as (1) ITU AI/ML in 5G Challenge (<https://aiforgood.itu.int/about-ai-for-good/aiml-in-5g-challenge/>) , (2) Collation of datasets and processing of machine readable data (3) Identification and Automation of workflows related to the ITU AI/ML initiatives.

## **Terms of Reference / Internship Objective:**

Under the supervision of the Programme Officer, the Intern will:

* Assist in the preparation of ITU AI/ML Challenge
* Monitor tools (inhouse backend with NVIDIA servers; cloud-based solutions) and the “sandbox” (= testing environment)
* Creation and maintenance of mentoring tools including interactive tools to help Challenge participants
* Preprocess datasets, analyse, create recommendation models from the data
* ML model training and fine-tuning: on ITU datasets
* Conduct in-depth research on ICT-related topics and emerging trends especially on artificial intelligence and machine learning.

1. **Competencies**

**Technical Competencies** *(Examples of technical competencies are knowledge of regulatory frameworks, ERP or project management methodologies, etc.):*

• Knowledge of Machine Learning and natural language processing (NLP)

• Familiarity with large language models and foundation models

• Excellent communication and teamwork skills

• Learning and Knowledge Sharing.

• An analytical mind

• Teamwork and Collaboration

• Research and Analysis

• Planning and Organizing

1. **Qualifications required**
2. **Education**:

A Bachelor or Master’s degree or University students in a relevant field such as Computer Science/Engineering, Information Technology, Telecommunications Engineering, Software Engineering, or an equivalent level of education and specialization in a related discipline is required.

1. **Work experience**:

No work experience is required.

1. **Languages:**  
   Fluency in oral and written English is a requirement.
2. **Training and Learning Elements:**

The intern will acquire excellent knowledge and experience of:

* Machine Learning and Artificial Intelligence
* Project Management
* Communication