

February 2025

Title: **Internship – Statistics Intern**

Bureau/Dept/Unit: BDT/DKS/IDA

Supervision: Esperanza Magpantay, Senior Statistician

Duration: 6 to 11 months maximum

Location: Geneva

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**

ICT Data and Analytics, Digital Knowledge Society, Telecommunication Development Bureau, ITU.

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| 1. **Organizational context**   This Intern will join the Data Science practice within the ICT Data and Analytics Division (IDA). She/He will report to the Senior Statistician and the Senior Data Scientist of IDA. |

## **Terms of Reference / Internship objectives**

The primary objective of this internship is to support the development of analytical tools and methodologies for ICT indicators using mobile phone data (MPD). The intern will:

* Develop and document Jupyter Notebooks for data analysis and visualization.
* Assist in processing, cleaning, and analyzing mobile phone datasets.
* Collaborate with IDA staff to align analyses with project objectives.
* Contribute to methodological documentation and technical reports.

Specifically, the Intern will:

* **Notebook Development:** Create well-documented Jupyter Notebooks showcasing analyses, visualizations, and methodological workflows.
* **Data Analysis:** Perform exploratory data analysis, statistical modeling, and data visualization of mobile phone data.
* **Collaboration:** Work closely with IDA staff to understand project requirements and provide insights to help deliver the required outputs.
* **Documentation:** Contribute to technical documentation, methodological notes, and presentations.
* **Quality Assurance**: Ensure data integrity and reproducibility of analytical workflows.

1. **Competencies**

**Technical Competencies**

* Proficiency in Python/PySpark, particularly in data science libraries (Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn).
* Experience with Jupyter Notebooks for data analysis and visualization.
* Understanding of statistical methods and data processing techniques.
* Familiarity with mobile phone data an asset.

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

University degree or studies in Data Science, Statistics, Computer Science, Economics, or a related field.

1. **Work experience**

No work experience is required.

1. **Languages**Very good command of English is essential.
2. **Training and Learning Elements**

The intern will acquire excellent knowledge and experience of:

* Gain hands-on experience in analyzing synthetic or real mobile phone data.
* Develop advanced data science skills in a real-world context.
* Collaborate with international experts in ICT statistics.
* Contribute to projects with significant policy and developmental impact.