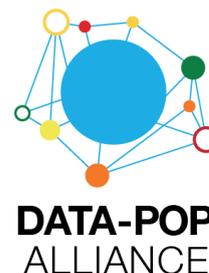# Terms of Reference

Lebanon-Based Data Scientist (Consultant)

September 19th, 2019

I.   Context and background

Data-Pop Alliance and the United Nations Economic and Social Commission for Western Asia (hereinafter referred to as "DPA" and "UN-ESCWA") are co-developing a pilot research project to assess the value of accessing and analyzing multiple data sources- including data collected by the Lebanese Central Administration of Statistics (CAS), UN agencies, telecom operators and other service providers- to shed light on the living conditions and interactions of Syrian refugees and host communities in Lebanon.

This project takes place against the backdrop of the displacement of millions of Syrian men, women, and children in the wake of the conflict that started in 2011, mostly to neighboring countries such as Lebanon. It also comes in the context of the 'Data Revolution' of the past decade, which has created expectations that new data sources and analytical techniques may yield useful insights to address complex human challenges—including those related to conflict.

Grounded in the Lebanese context, the project is expected to show how these types of approaches may help national, international and local organizations develop better policies and programmes to meet these populations' needs, while also providing pathways for them to weigh in on access to and analysis of data about them.

In this context, DPA is looking for a Lebanon-based Data Scientist Consultant to join the project over the period October 2019-April 2020, full or part-time (60% minimum).

II.   Scope of work

Working with DPA's Project Lead and Senior Data Advisor, the Data Scientist Consultant for the project on *"Leveraging Behavioral and Humanitarian Data Sources to Analyze the Development Challenges Faced by Syrian Refugees and Host Communities in Lebanon"* is expected to fulfill the following duties:

Access and Analysis of Data Sources (40%)	- Work with the UNESCWA team to secure access to relevant data sources of UN humanitarian agencies, telecom operators and the Lebanese government. - Support the DPA Project Lead and Senior Data Advisor in Identifying other open data sources outside the UN that may be relevant for the project. - Collect, clean, organize and the data collected (structured and unstructured). - Create a directory in Amazon Web Services (AWS) or other cloud services to safeguard the information collected from data sources.

Development of relevant algorithms (40%)	● Co-develop algorithms of the indicators required for the project for periods of time and geographic coverage, following ethical considerations in terms of the temporal and geographic granularities. ● Create simple interactive maps and visualizations summarizing the key findings.
Policy Support (20%)	● Support the set-up and animation of a small advisory group. ● Support the organization of a 2-day capacity building and awareness-raising workshop to present and discuss the key results of the project and other projects and methodologies. ● Support the organization of a 2-day 'Data Challenge' in Beirut bringing together local communities to discuss and develop possible uses of the indicators, algorithms, and maps.

III. Skills

The applicant for the Data Scientist Consultant position has to meet the following requirements:

- Masters degree in statistics, applied mathematics, physics, computational finance, economics, computer science, engineering or other related technical disciplines.
- A first degree and 3+ years relevant experience may be accepted in lieu of a higher university degree.
- At least three years of experience in analysis and data visualization.
- Familiarity working with quantitative and qualitative data.
- Develop back and front end as requested for the Project Lead.
- Experience with scripting, coding, and web design required for data access, analysis, and presentation.
- Experience working with Big Data and AI (Machine Learning and Deep Learning, including Convolutional Neural Networks, Short and Long Term Memory algorithms).
- Experience analyzing Call Detail Records and or Satellite Imagery is desired.
- Work in python, R and any other programming language suggested by Data-Pop Alliance and UN-ESCWA.
- Be familiarized with Auth0 and 0Auth 2.0, and other data security measures.
- Understand the culture of Lebanon and provide advice in a language that is appropriate and respectful to policymakers and the public in general.
- Demonstrated experience presenting work to both technical and non-technical audiences.
- Experience working in the fields of global development or crisis management.
- Excellent communication skills.
- Fluent in English and Arabic; French an asset.

IV. Payment

Competitive compensation based on experience.

V. Duration, Workload & location

The work shall be carried out from November 1st, 2019 to April 30th, 2020, and the selected candidate shall be based in Beirut, Lebanon.

The work requires a commitment of 3 working days per week. One working day is equivalent to 8 working hours.

The candidate must have a valid work permit in Lebanon by the time of the application and throughout the duration of the project.

VI. Reporting & Communication

The Contractor will report to Emmanuel Letouzé, Director and Co-Founder of Data-Pop Alliance. The contractor will also be supervised by the project's advisor and Coordination team. The Contractor will keep the Organisation informed of progress on the project by e-mail and attending check-in meetings when appropriate.

VII. Recruitment process

Qualified candidates are requested to submit a CV to jobs@datapopalliance.org with the subject line "Data Scientist DPA - UN ESCWA" by October 31th, 6:00pm EST. Please include in the body of the email: languages spoken, two references and **your salary range in monthly terms.**