

## **Engineer Bainomugisha**

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AirQo, Uganda. Makerere University, Uganda

### **Author list (excluding presenting author)**

#### **Abstract**

People living in urban environments are at greater risk of exposure to unhealthy air quality. However, many urban spaces, particularly those in low- and middle-income countries, lack data on the spatial and temporal variations in air quality. Traditional monitoring methods are either scarce or non-existent, leading to significant data gaps on the scale and severity of air pollution in many cities. To address this air quality data gap, the AirQo system has been developed. This system utilizes a network of low-cost, high-resolution air quality monitors optimally deployed alongside reference-grade monitors. AirQo leverages Internet of Things (IoT) technology and machine learning to provide real-time, high-resolution air quality data and predictive models. With deployments in over 10 cities across Eastern and Western Africa, the AirQo system is leveraging new technologies to monitor and increase access to air quality information. This information is made accessible to both citizens and policymakers through user-friendly digital platforms. By providing contextualized data, AirQo empowers stakeholders to make informed decisions aimed at combating air pollution and improving public health in African cities.

#### **Early Career Scientist**

NO, I am not an early career scientist.

#### **IGAC Activities**

Allin-Wayra: Small Sensors for Atmospheric Science

#### **IGAC Regional Working Groups**

ANGA: African Group on Atmospheric Sciences