***Open Machine Learning for Earth Observation (ML4EO) in Rwanda:***

***Developing and Implementing an Application Oriented Training***

**Program: Presence-based Training Block on**

**‘Module 5: Data curation and visualization of EO data for machine learning’**

**15th & 16th April 2023, Digital Transformation Centre, Kigali**

**DAY 1:**

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| 09:00 – 09:15 | Welcome / opening of workshop |
| 09:15 - 10:00 | * Presentation of trainers and participants * Levelling of expectations, workshop objectives and program * Workshop rules & regulations |
| **INTRODUCTION TO DATA CLEANING & PROCESSING** | |
| 10:00 – 10:30 | QUIZ on course reader |
| 10:30 – 10:45 | Tea break |
| 10:45 - 11:15 | Lecture, Q&A: Deep dive - data cleaning & processing |
| **DATA CURATION WITH IMAGE DATASETS** | |
| 11:15 – 12:00 | Lecture, Q&A: Deep dive - data curation with image datasets |
| 12:00 – 13:00 | Lunch break |
| **DATA CURATION WITH EO DATA** | |
| 13:00 – 14:00 | Lecture, Q&A: Deep dive - data curation with EO data |
| 14:00 – 15:00 | Exercise 5\_2: Agricultural Pipeline using Google Earth Engine(Setup and Introduction) |
| 15:00 – 15:15 | Tea break |
| 15:15 – 16:00 | Exercise 5\_2: Agricultural Pipeline using Google Earth Engine  (Crop yield estimation) |
| 16:00 – 16:45 | Exercise 5\_1: LULC using Sentinel Hub |
| 16:45 – 17:00 | Daily evaluation |

**DAY 2:**

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| 09:00 – 09:20 | * Recap of learnings of previous day * Feedback daily evaluation |
| **DATA CURATION WITH EO DATA (CONT.)** | |
| 09:20 - 10:30 | Exercise 5\_3: Cloud masking using Google Earth Engine |
| 10:30 - 10:45 | Tea break |
| 10:45 – 12:00 | Exercise 5\_5: Object Detection using GEE |
| 12:00 – 13:00 | Lunch |
| **VISUALIZATION OF EO DATA** | |
| 13:00 – 14:00 | Lecture, Q&A: Deep dive – visualization of EO data |
| 14:00 – 14:30 | Application Exercise: GUI-based visualization of EO data |
| 14:30 – 15:00 | Code along: EDA on Landsat Data using Earthpy |
| 15:00 – 15:15 | Tea break |
| 15:15 – 16:30 | Exercise 5\_4 EDA Satellite Imagery using EarthPy |
| 16:30 – 17:00 | Summary, next steps, workshop evaluation and closure |