

# 5<sup>th</sup> Big Data Africa School

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Project Goals and Python Notebooks

## Projects 4: Monitoring Forests peatland/ Mangroves in Africa

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- Well-functioning forests, peatland and Mangroves play a vital role in keeping our planet healthy.
  - ✓ Forest, vital for climate control
  - ✓ Peatland vital carbon (CO<sub>2</sub>) capture
  - ✓ Mangroves for coastal protecting.
- These land cover types are not adequately monitored in Africa
- Aim is to use high resolution optical satellite or arial images and object detection or segmentation approached to identify these land cover types.



# Projects 4: Monitoring Forests peatland/ Mangroves in Africa

## - Notebooks

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- Documentation datasets: [https://docs.digitalearthafrika.org/en/latest/data\\_specs/index.html](https://docs.digitalearthafrika.org/en/latest/data_specs/index.html)
- Introduces users to Scalable machine Learning: [https://github.com/digitalearthafrika/deafrica-sandbox-notebooks/tree/main/Real\\_world\\_examples/Scalable\\_machine\\_learning](https://github.com/digitalearthafrika/deafrica-sandbox-notebooks/tree/main/Real_world_examples/Scalable_machine_learning)
- Landsat imagery - [https://github.com/digitalearthafrika/deafrica-sandbox-notebooks/blob/main/Datasets/Landsat\\_Surface\\_Reflectance.ipynb](https://github.com/digitalearthafrika/deafrica-sandbox-notebooks/blob/main/Datasets/Landsat_Surface_Reflectance.ipynb)
- Sentinel-2 - [https://github.com/digitalearthafrika/deafrica-sandbox-notebooks/blob/main/Datasets/Sentinel\\_2.ipynb](https://github.com/digitalearthafrika/deafrica-sandbox-notebooks/blob/main/Datasets/Sentinel_2.ipynb)
- GeoMADs - <https://github.com/digitalearthafrika/deafrica-sandbox-notebooks/blob/main/Datasets/GeoMAD.ipynb>