Environmental Data Acquisition and Processing

Water Resource Monitoring and Catchment Analysis

By

Jason Kabi

Centre for Data and Artificial Intelligence

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SOLVING REAL WOLRD PROBLEMS

Session breakdown

Session Brake Down

a) Motivation – The main goal

b) What water parameters are being monitored?

c) How are the parameters monitored?

d) Hardware development

e) Data acquisition

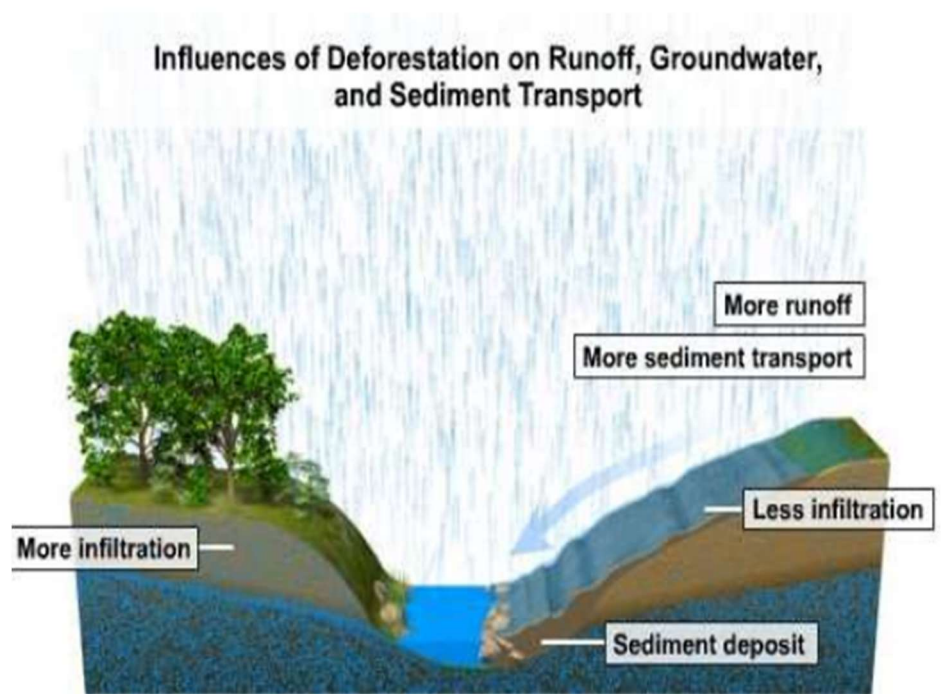f) Data analysis – Anomaly detection

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Motivation

Main goal: River catchment analysis using water-level data by leveraging IoT and machine learning
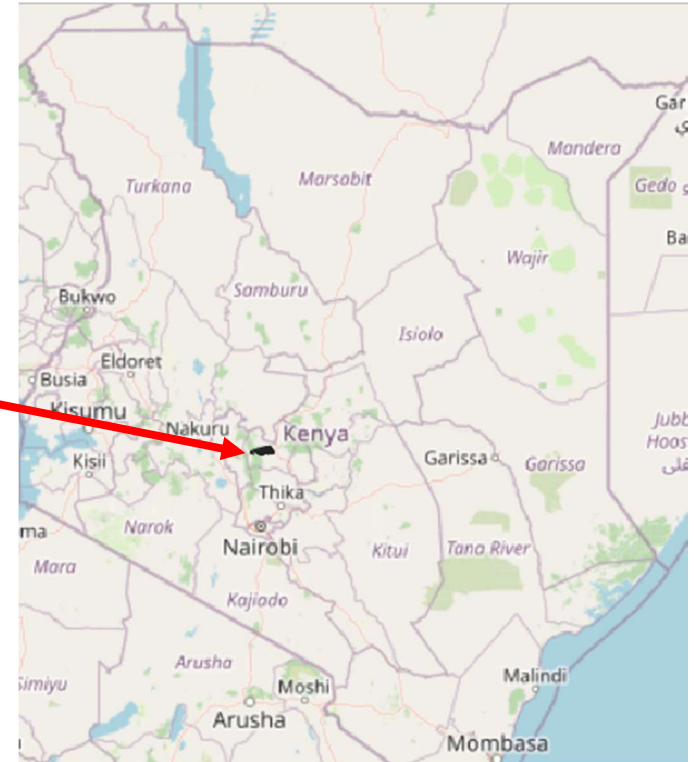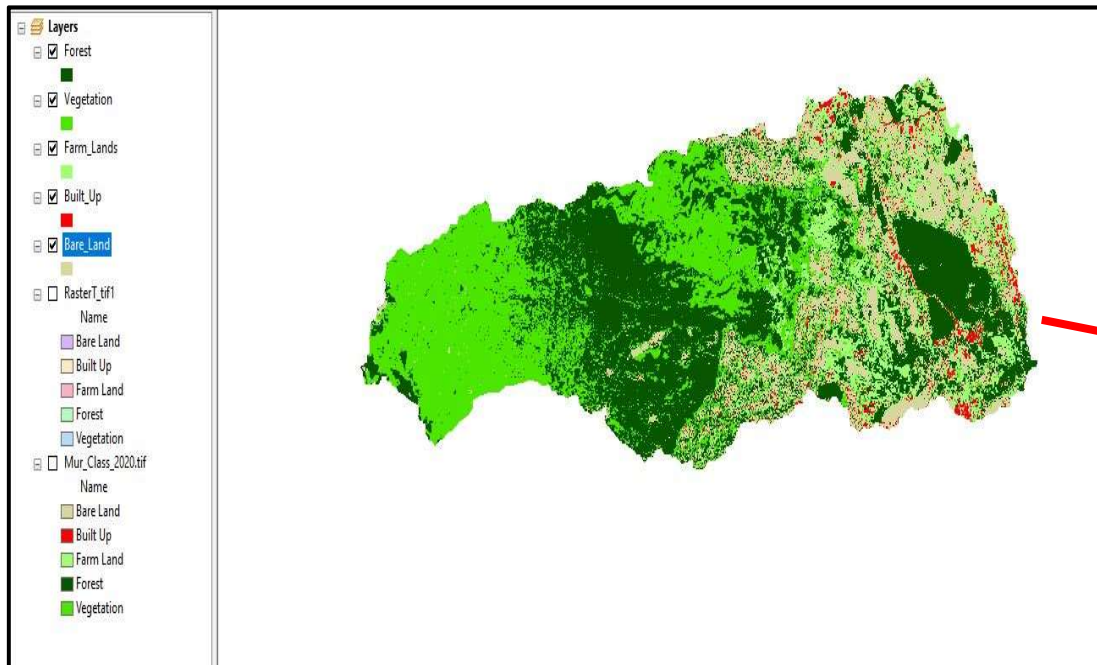
Takeaways

- Water level data can be used to "diagnose" a river catchment by watching the trends over some time.

- Question: How long does a spike in water level take to occur after a spike in rain.

Influences of Deforestation on Runoff, Groundwater, and Sediment Transport

More runoff

More sediment transport

More infiltration

Less infiltration

Sediment deposit

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Catchment under study

Muringato Water shed – Nyeri county - Kenya

Deployment location (catchment under study)
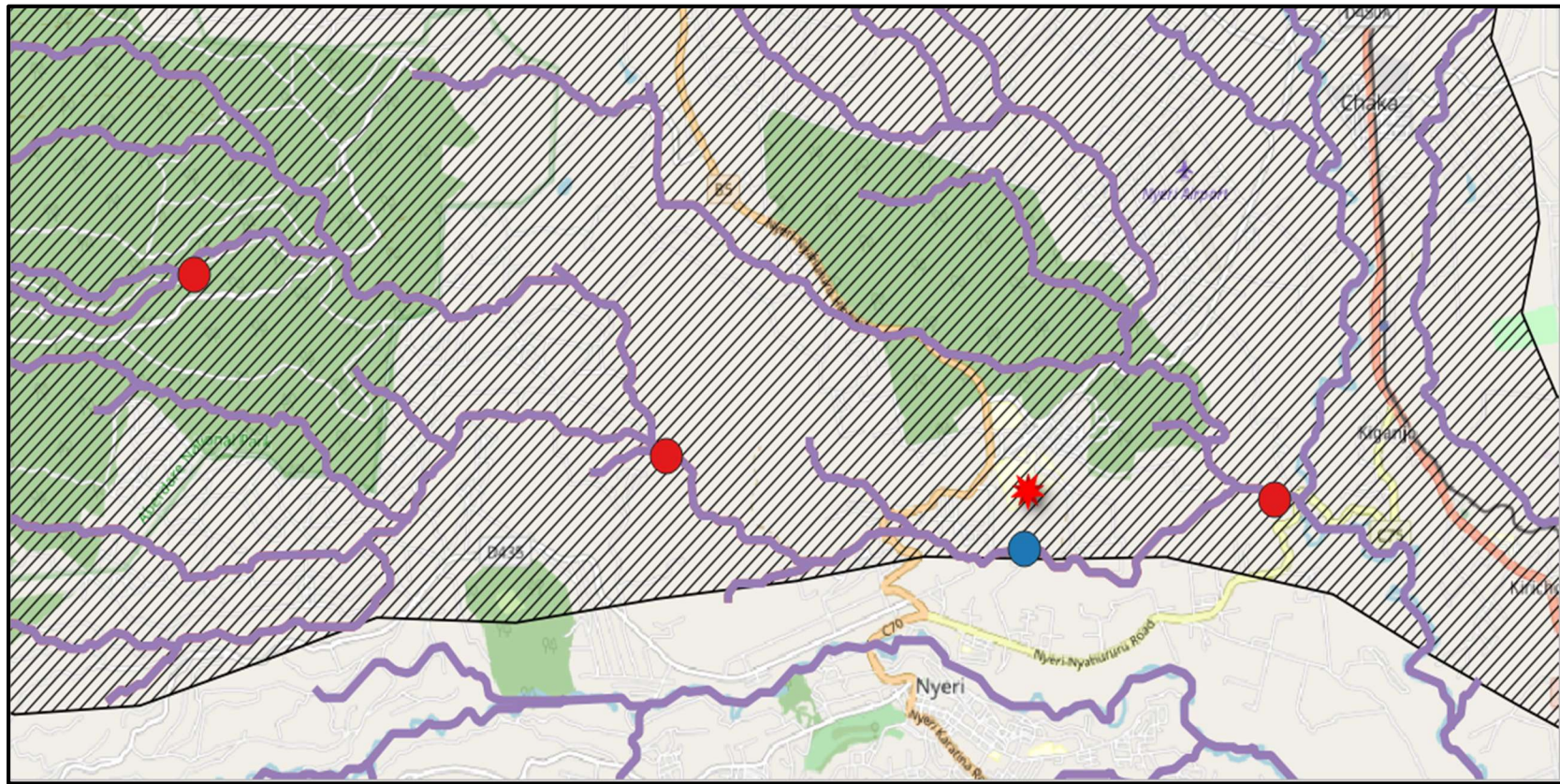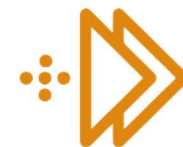
Water level monitoring setup (Flow Chart)
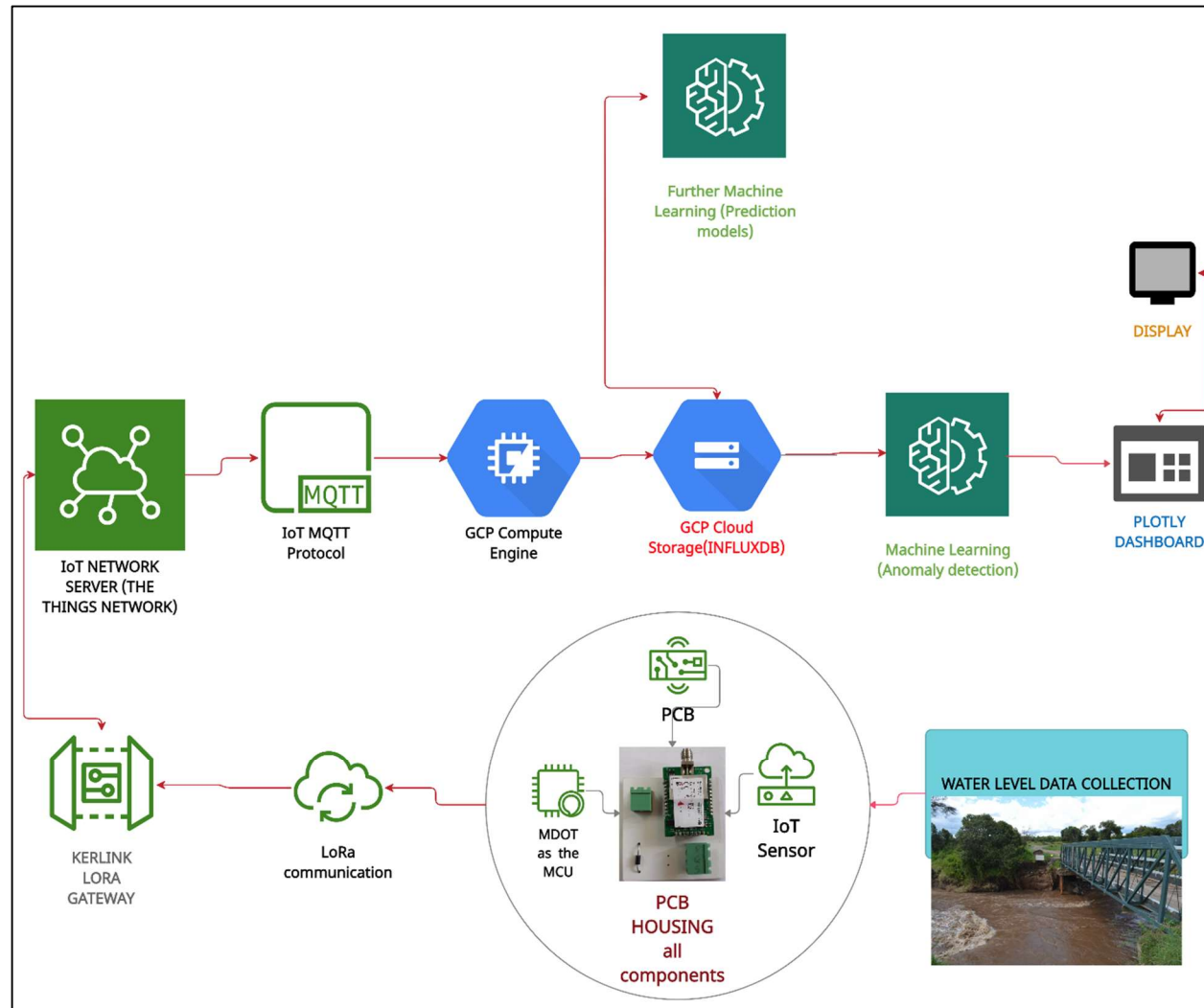
Hardware setup

Ready for deployment

Deployed

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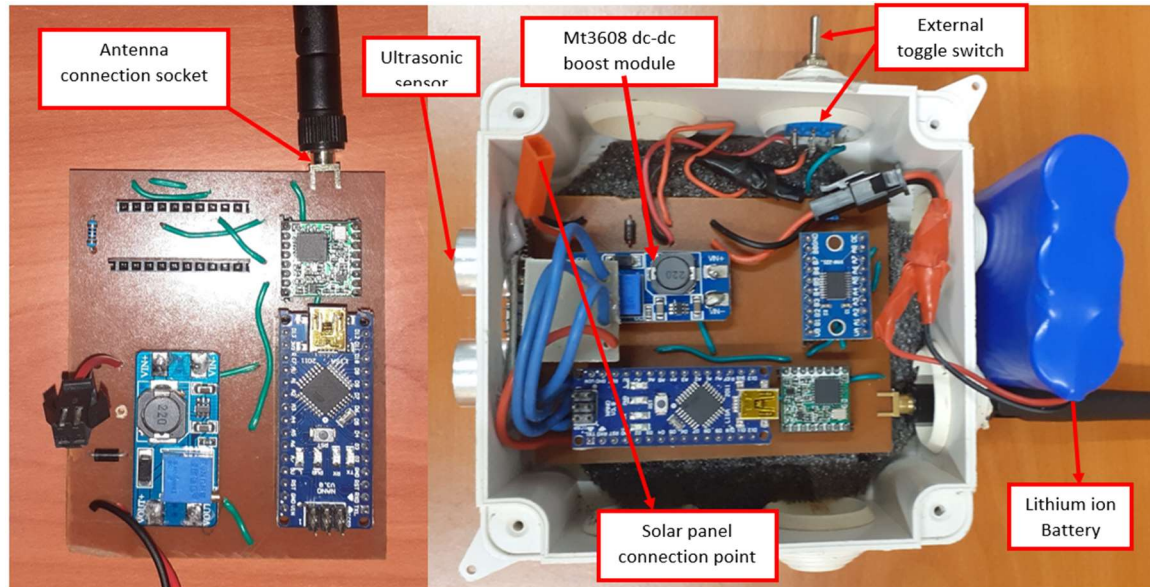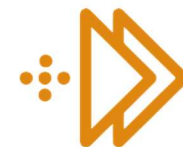
UPNEXT

ANOMALY DETECTION ON TIME SERIES WATER LEVEL DATA

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THANK YOU

Web - Dekut-dsail.github.io

Web - kabi23.github.io

Github – DEKUT-DSAIL