Environmental Data Acquisition and Processing

Water Resource Monitoring and Catchment Analysis

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SOLVING REAL WOLRD PROBLEMS

Session breakdown

Session BrakeDown

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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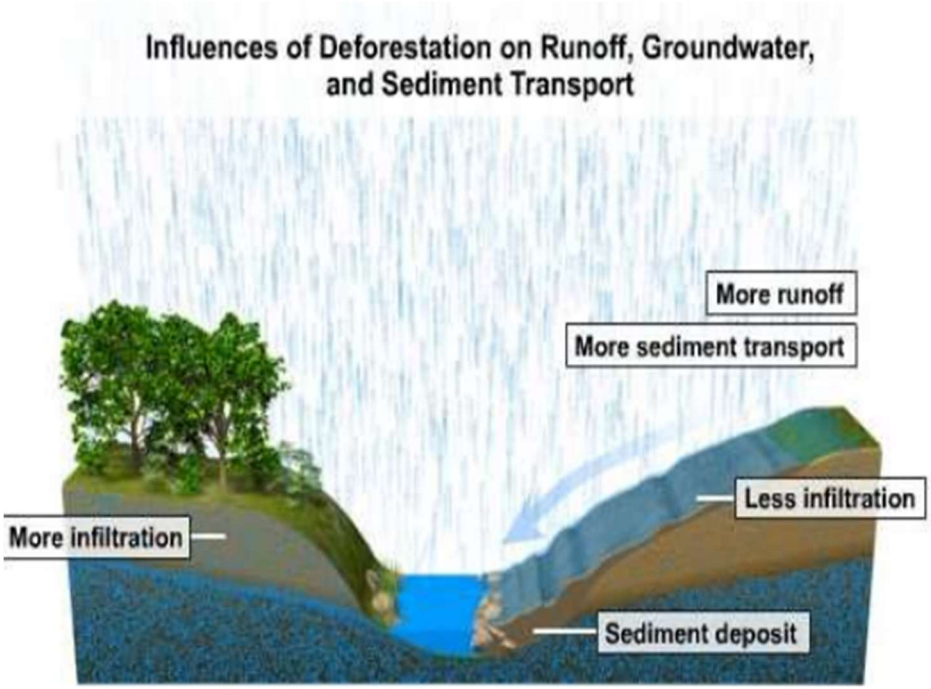
Motivation

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.



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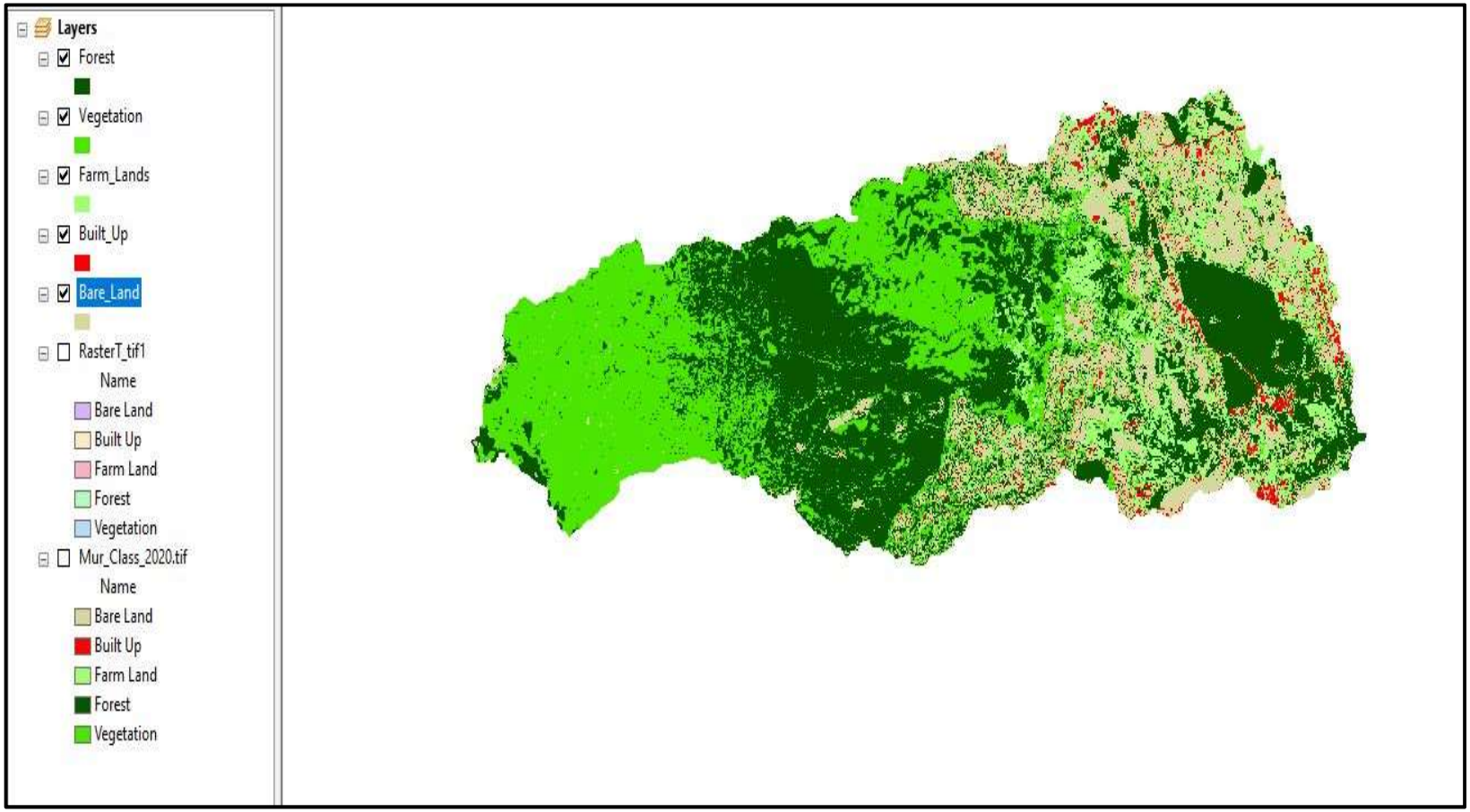
Catchment under study

Muringato Water shed – Nyeri - Kenya



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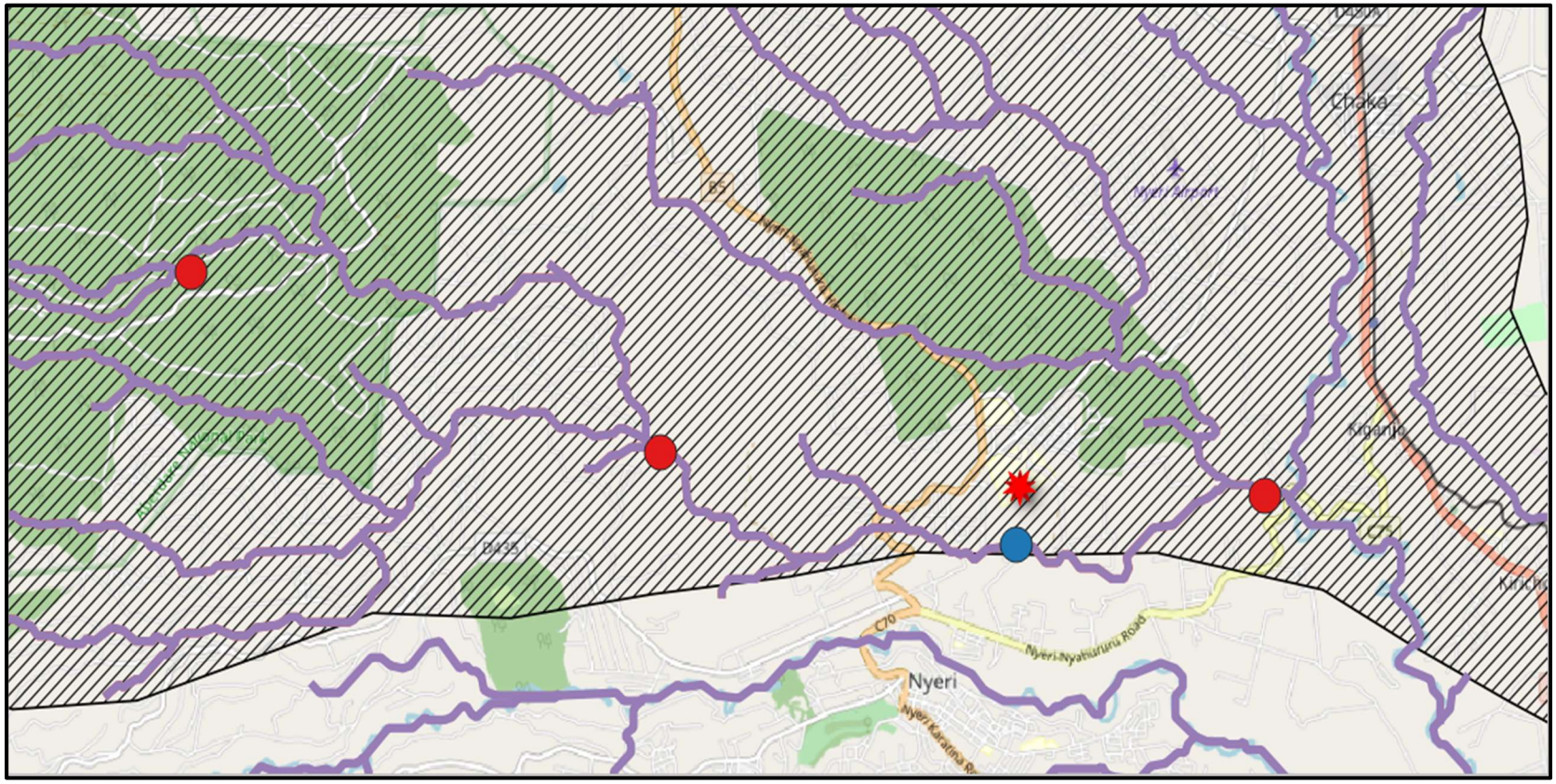
Deployment location (catchment under study)



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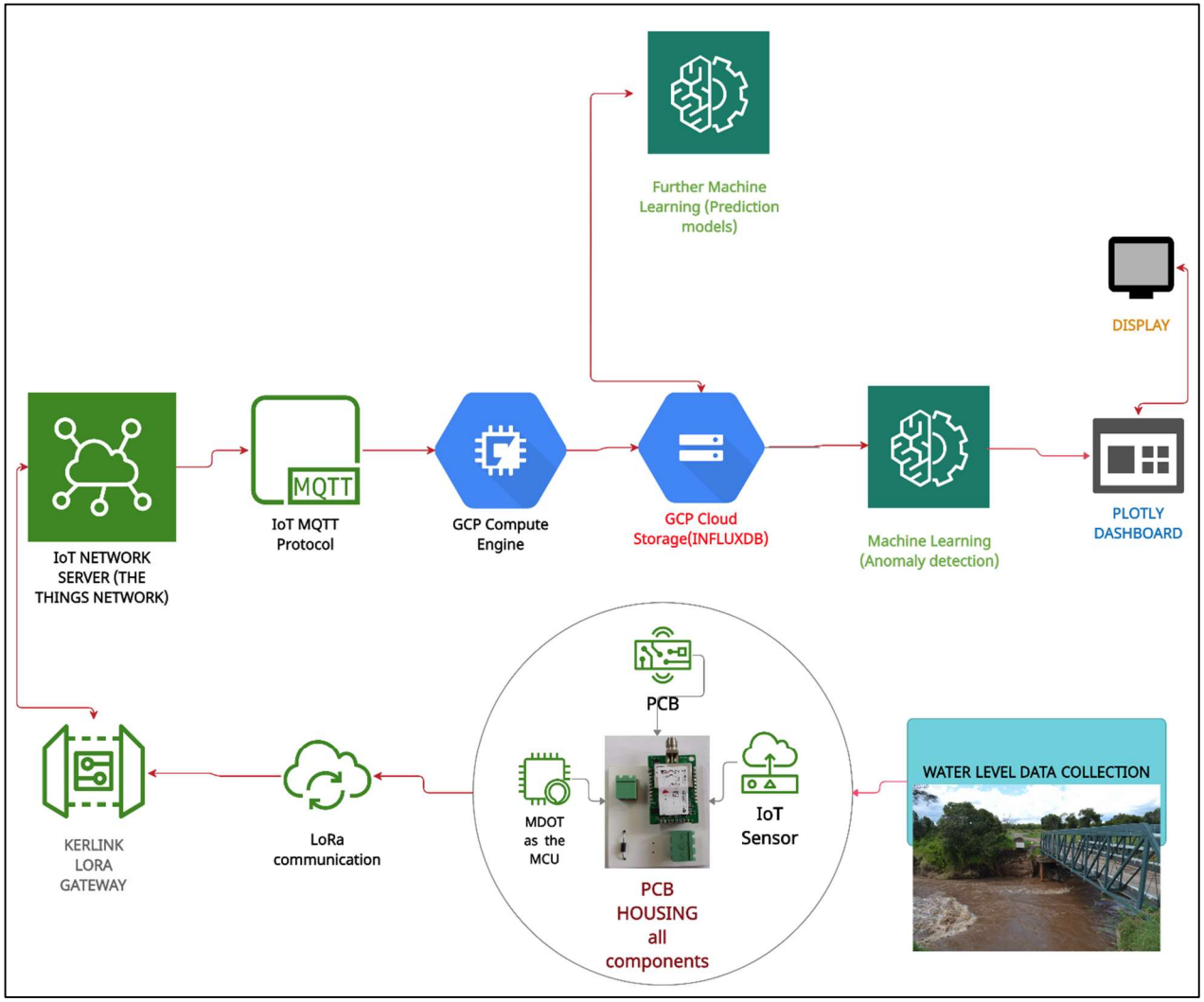
Water level monitoring setup (Flow Chart)



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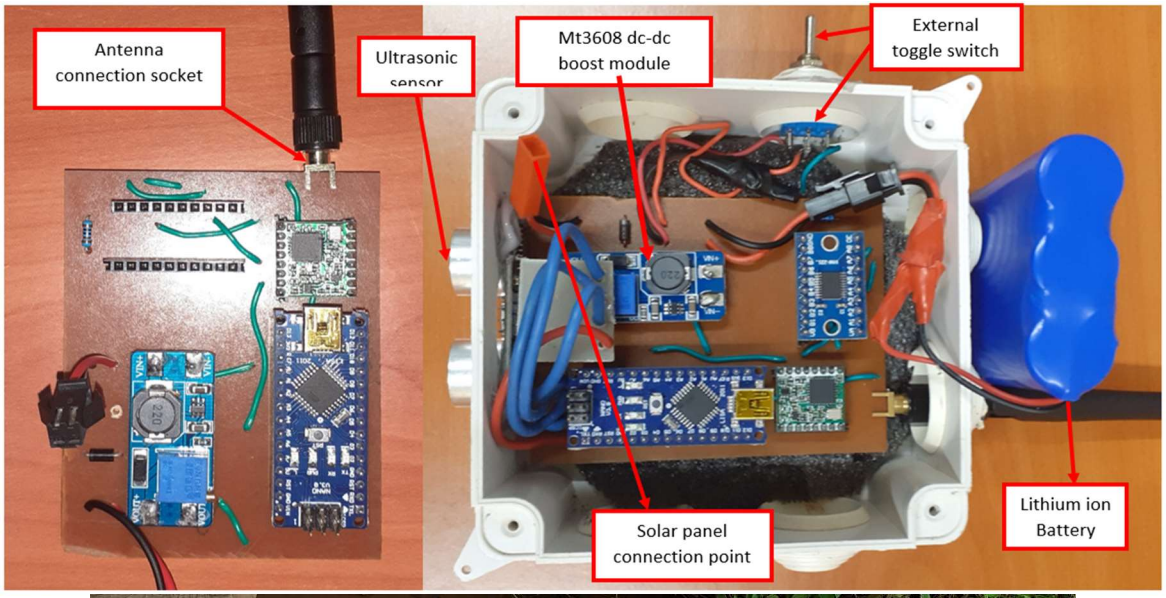
Hardware setup

Ready for deployment



Deployed

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UPNEXT

ANOMALY DETECTION ON TIME SERIES WATER LEVEL DATA

7

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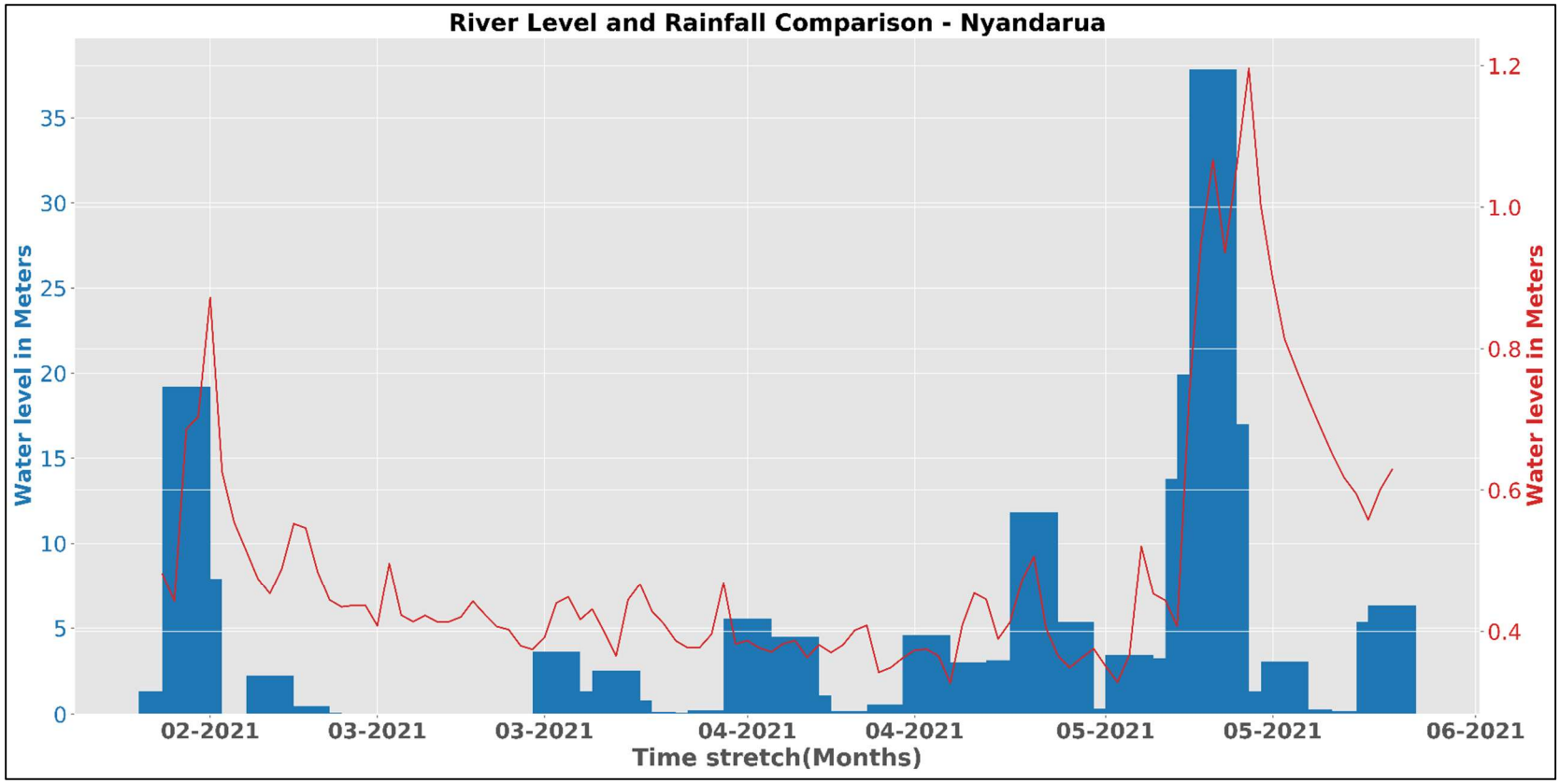
Integration with other data sets (rainfall data from TAHMO)



THANK YOU

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