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) Water level (stage) monitoring – modelling concept
c) How is the water parameter being monitored?
d) Hardware development
e) Data acquisition
f) Data analysis – Anomaly detection
g) Data analysis – Prediction

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Diagnosing or studying the catchment

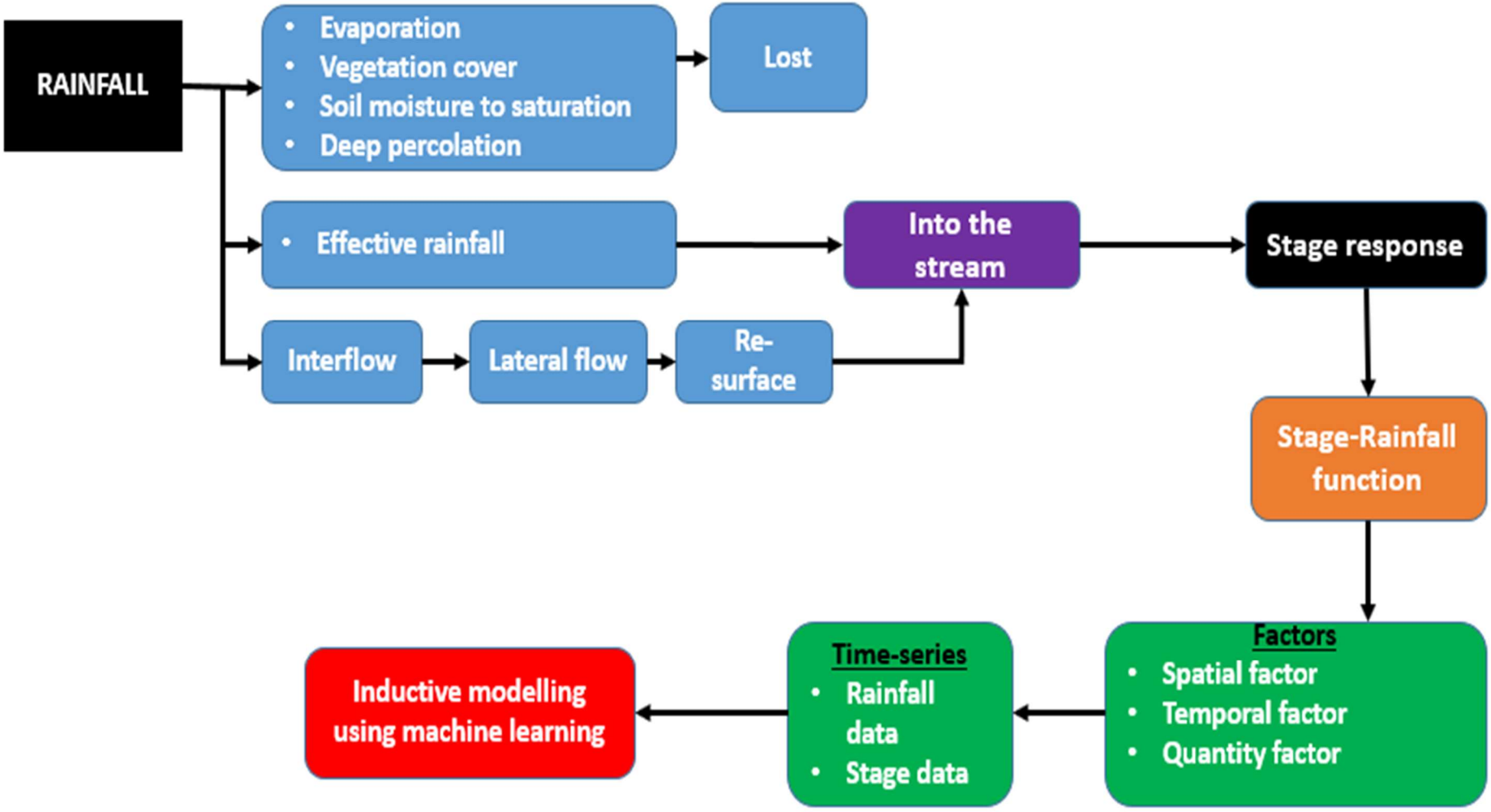
Why?

- Climate change
- Encroachment by humans
- Providing data for improved conservation efforts

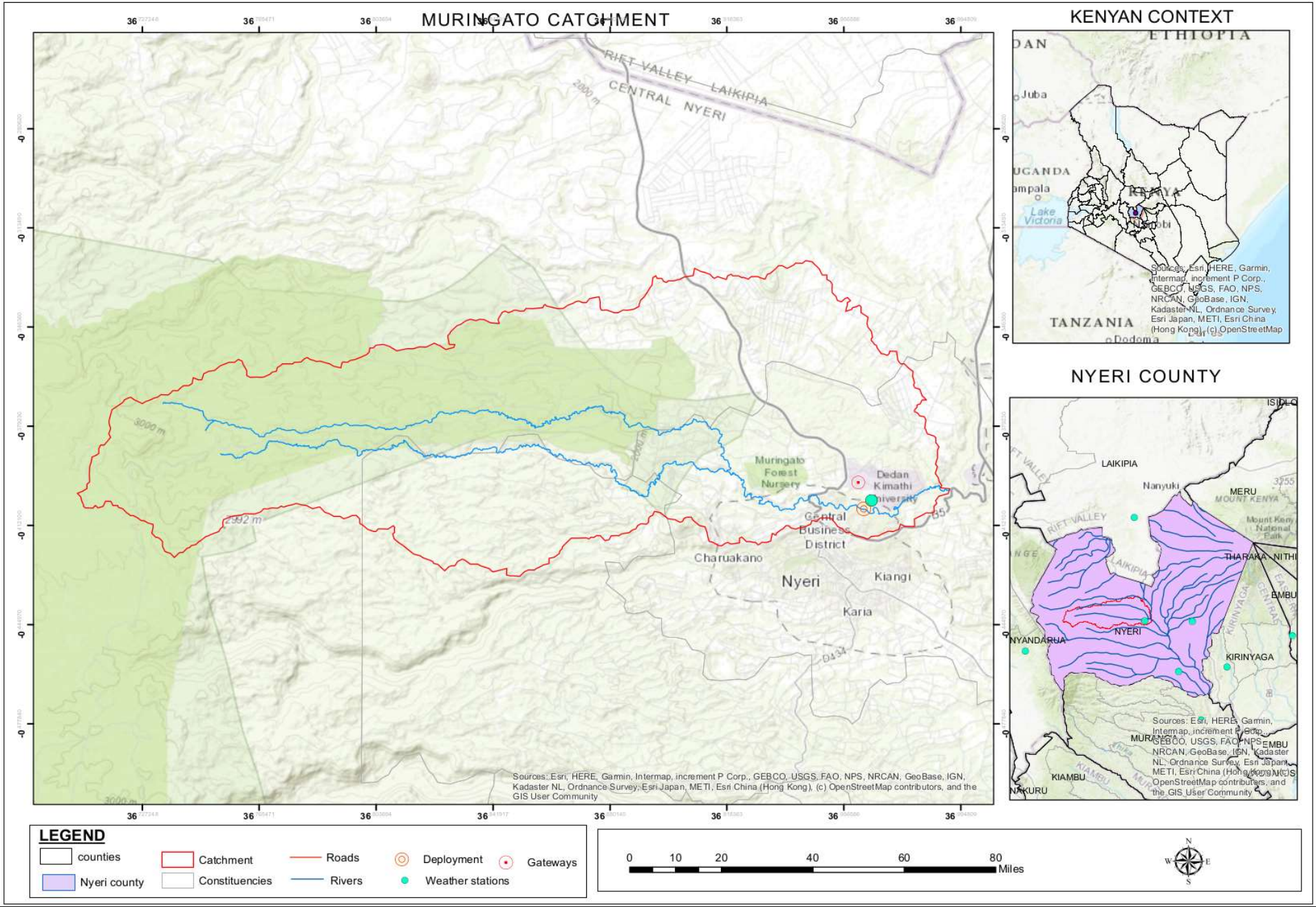
Datasets that can acquired

- River water parameters (stage, turbidity, pH etc.)
- Satellite images that can acquired over time (vegetation cover)
- Acoustic data (sound)
- camera trap data (images)
- Soil samples

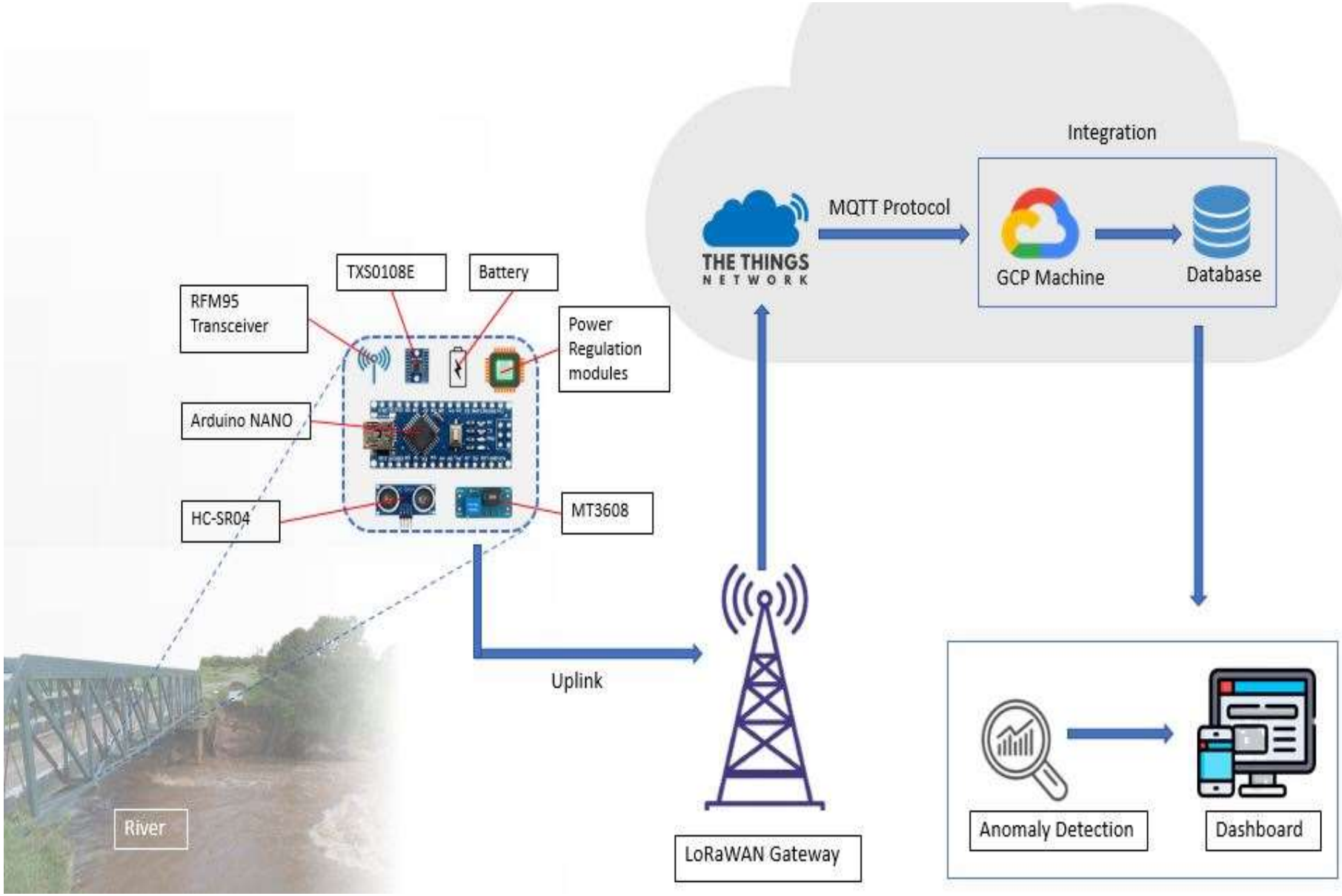
Motivation – modelling concept



Catchment under study

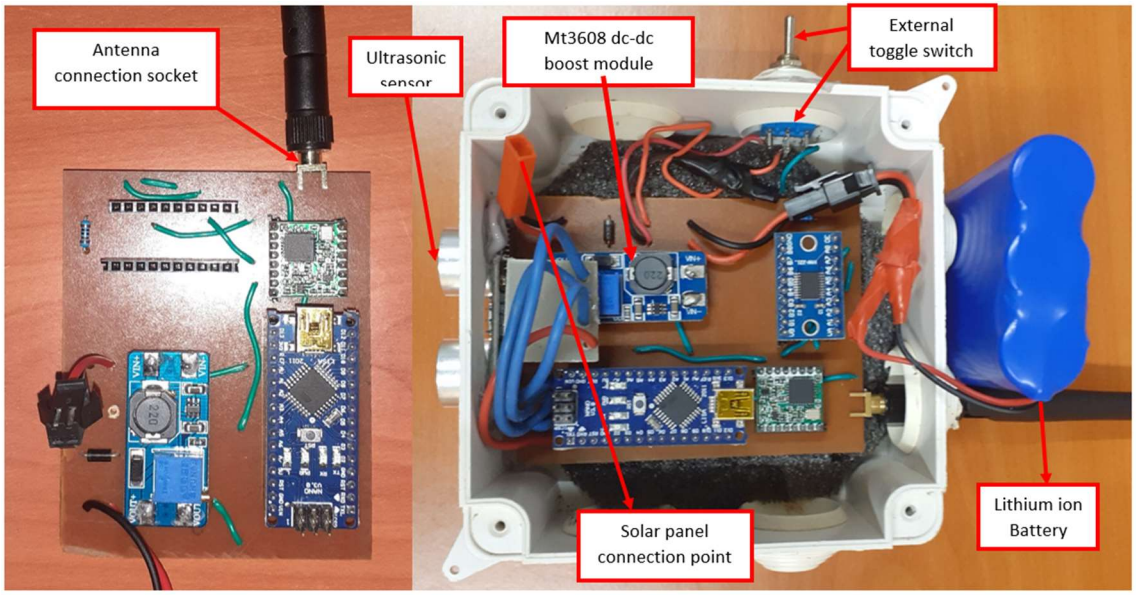


Water level monitoring Architecture (Flow Chart)



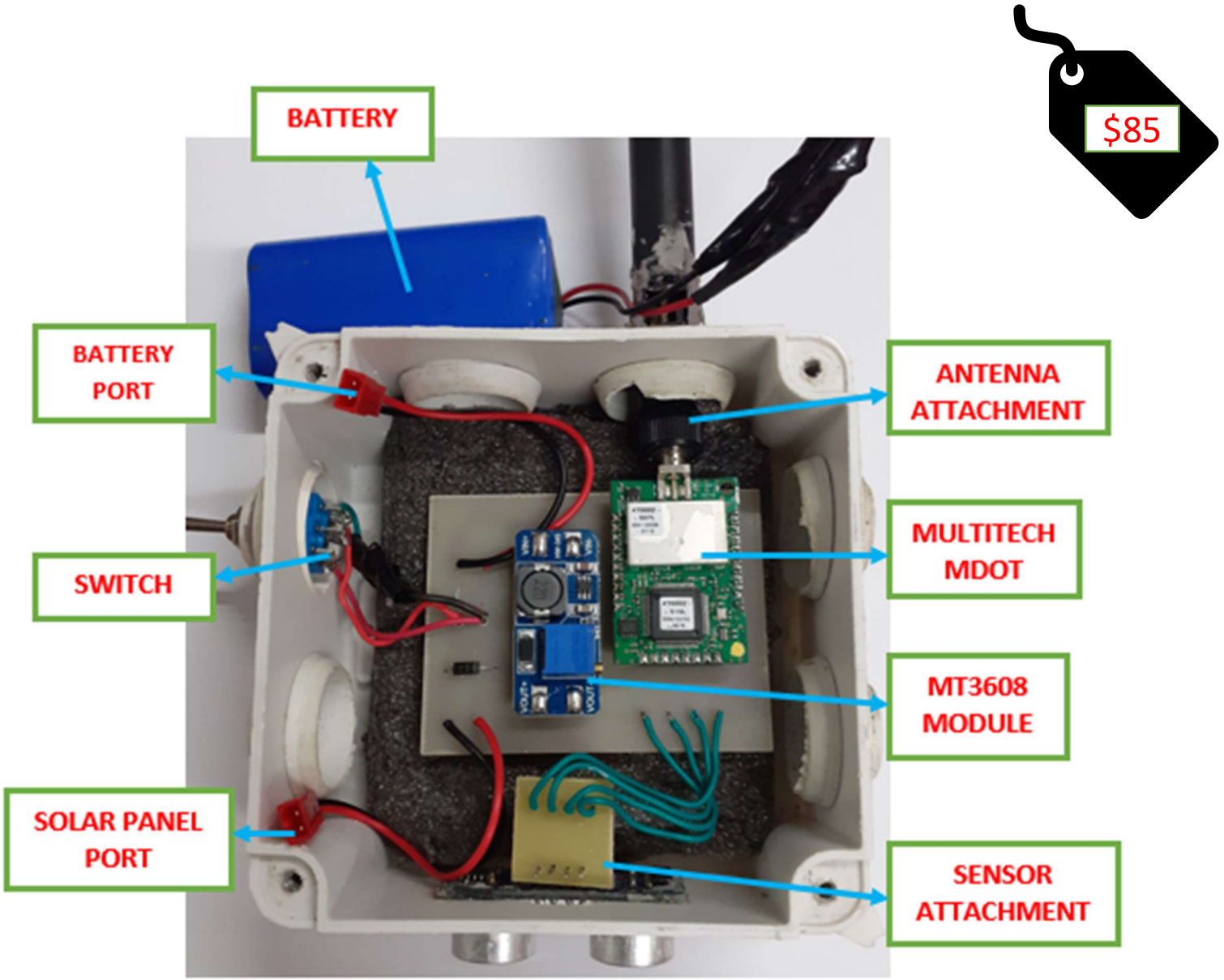
Hardware setup

Ready for deployment



Deployed

Prototype developed – MultiTech mDot based

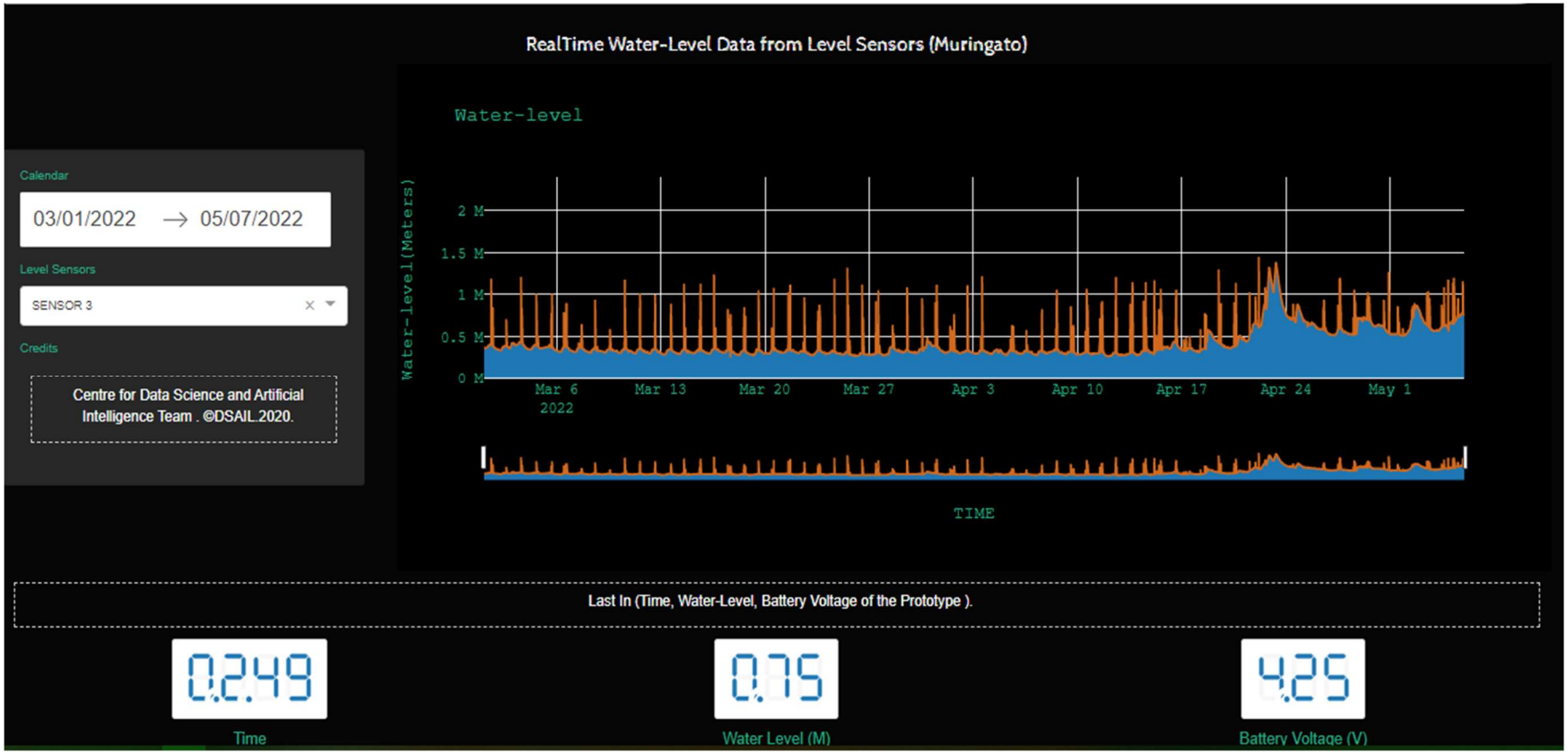


Deployment

Data visualization app

Web application link

https://water-monitoring-258811.wl.r.appspot.com



UPNEXT

ANOMALY DETECTION

PREDICTION

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THANK YOU

Web - Dekut-dsail.github.io

Web - kabi23.github.io

Github – DEKUT-DSAIL