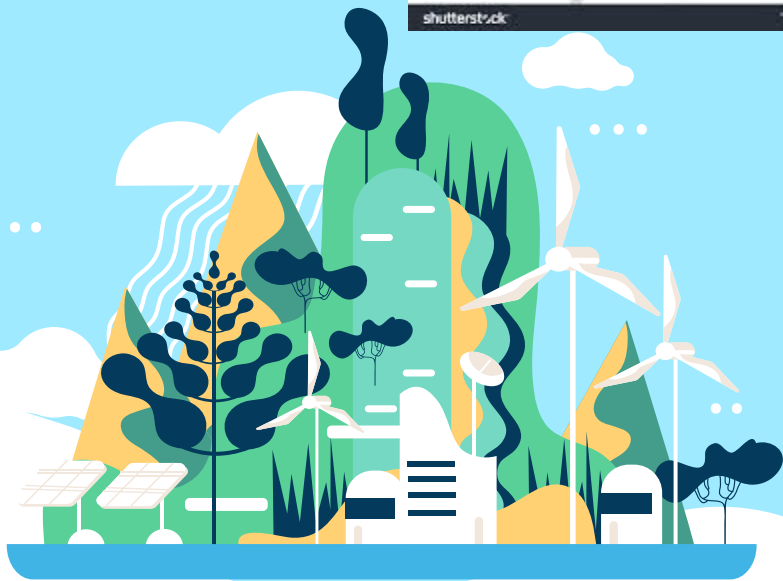


Tanzania Water Wells

Machine Learning Model



The Miner League

The team was tasked with creating a machine learning model that would help the Ministry of Water under the government of Tanzania to monitor the water wells across the country.





PROJECT GOAL



The government of Tanzania to adopt the model developed in order to improve on the general maintenance operations on the water points to ultimately meet the water needs of its citizens.





OBJECTIVES

- To predict the condition of a waterpoint pump based on age.
- To identify which region has the most nonfunctional waterpoint pumps.
- To identify effect of water quality on water pumps

01

Business Understanding

02

Data Understanding

03

Data Preparation

04

Modelling

05

Evaluation

01



BUSINESS UNDERSTANDING

- About 24 million Tanzanians in need of clean water.
- Water wells developed as a solution to the water needs.
- Need to develop a model to identify and improve on maintenance operations of the wells.

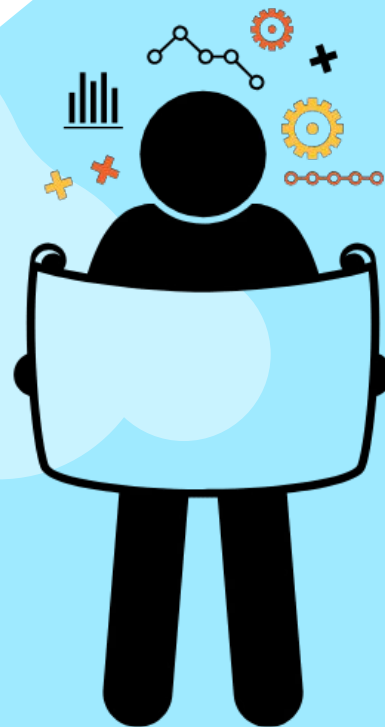


02



DATA UNDERSTANDING

The dataset was sourced from Driven Data Community which had 59,400 data points and 41 columns.



03

DATA PREPARATION



Cleaning • • •

The process involved dealing with the irregularity present in the data.

Labelling • • •

Relevant features were carefully chosen for the modelling process.

04

MODELLING

The model adopted was the
RANDOM FOREST MODEL.



05

EVALUATION

The model that should be adopted by the government has a precision score of 66%.



RECOMMENDATIONS



- The government should prioritize on drawing water from springs..
- Water points with enough water should be closely monitored, as the high use could lead to their failure.

THIS IS OUR TEAM

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Questions & comments?

Thank you for your
attention.



