

Tanzanian Water Well Project



Objective

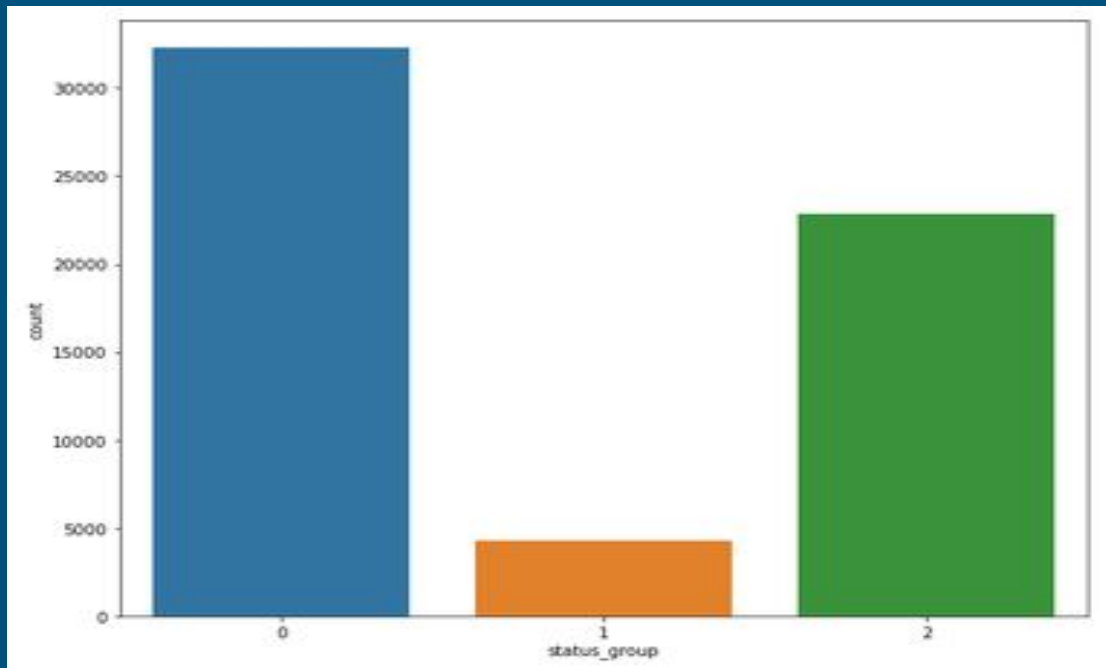
Help NGO to:

- focus on locating wells needing repair
- find patterns in non-functional wells to influence how new wells are built.
- predict the condition of a water well

Business Understanding

Tanzania, as a developing country, struggles with providing clean water to its population of over 57,000,000. There are many water points already established in the country, but some are in need of repair while others have failed altogether hence help the NGO to locate and find patterns in non-functional water wells.

Data Understanding

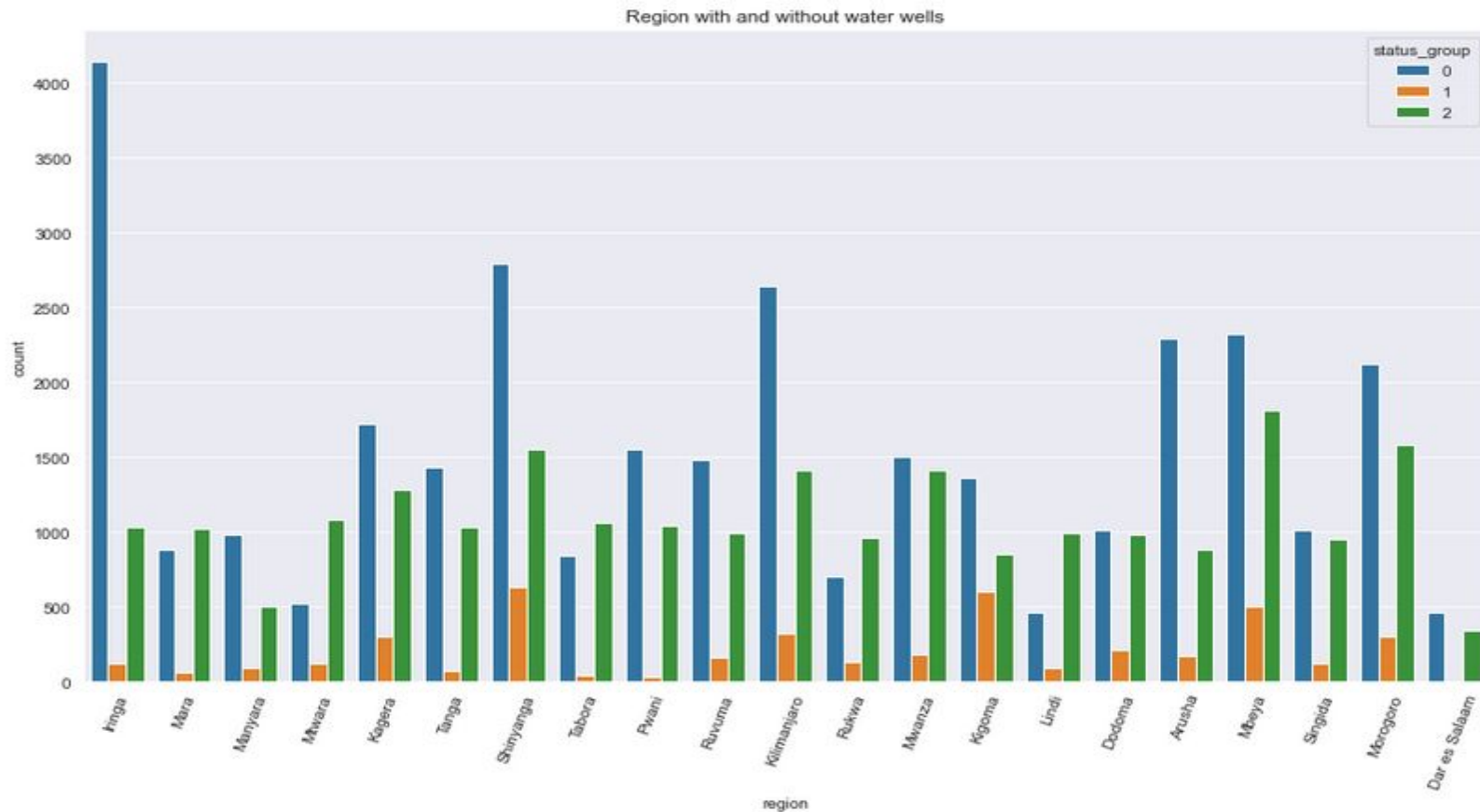


0 = functional water points

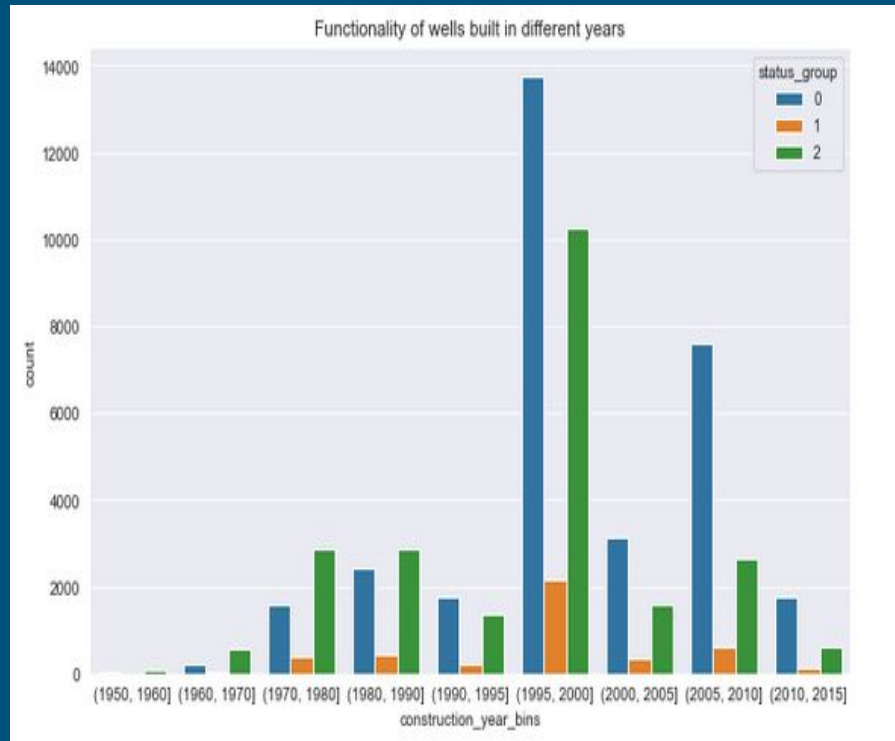
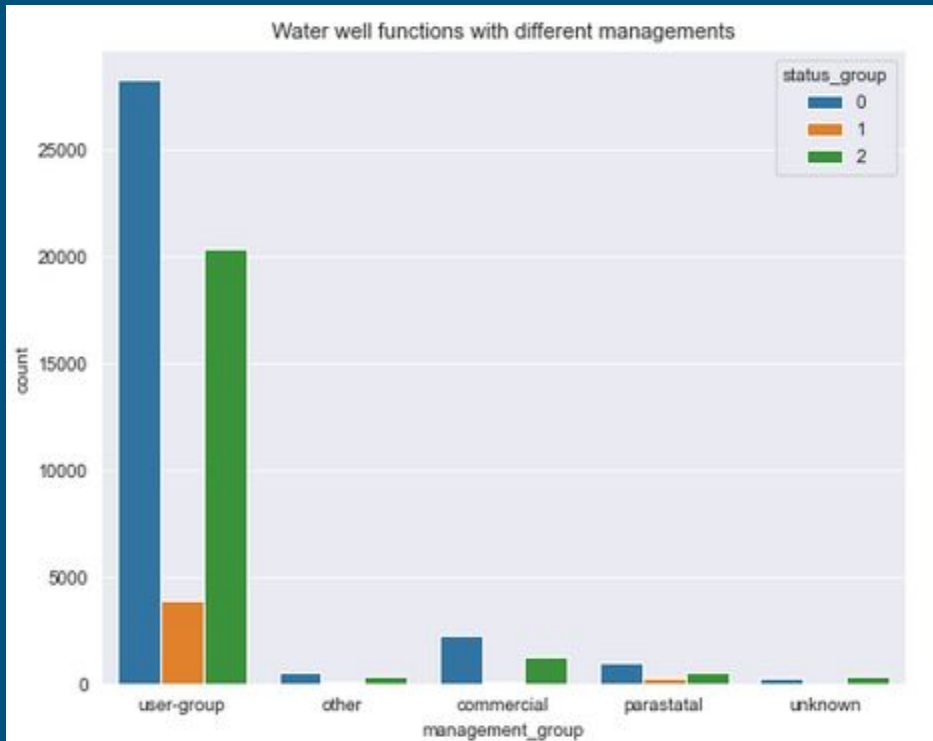
2 = non-functional water point

1 = functional but needs repair water points

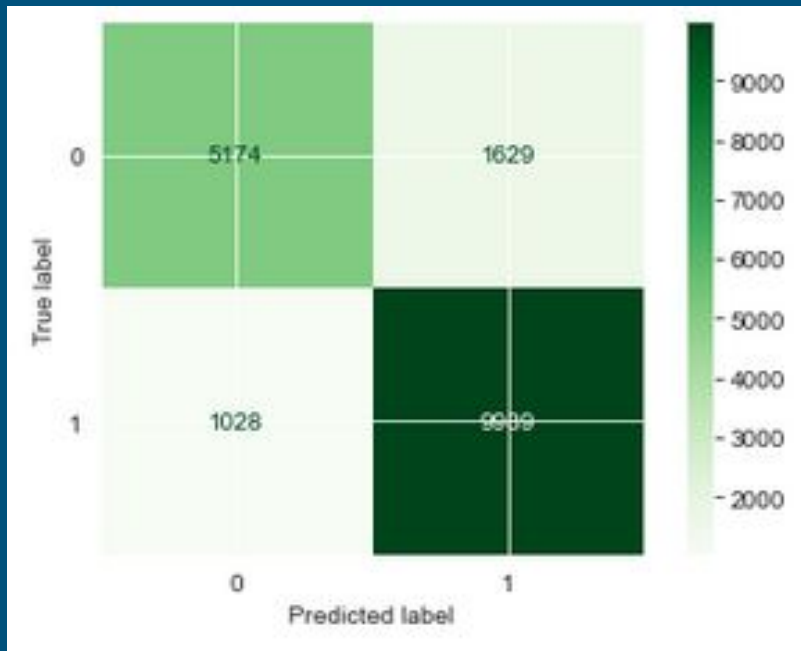
Water well functionality in regions



patterns in non-functional wells



Data analysis



1028 (false negative)

1629 (false positive)

9939 (True Positive)

5174 (True Negative)

Our best model is
Random forest
classifier with an
accuracy of 0.85.

Recommendation

1. Research on strategies used to build wells in 1995-2000 and 2005-2010
2. Increase user-group management since their well perform really well
3. Repair wells in places like Mboya, Shinyanga, Kigoma and Kilimanjaro

Conclusions

- Many wells need repair compared to non-functional ones.
- Best constructions were done in 2000-2005
- Plenty of good quality water
- Most of the water is not paid for.

Thank you!!

Questions?

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