



SOLVING THE WATER CRISIS IN TANZANIA

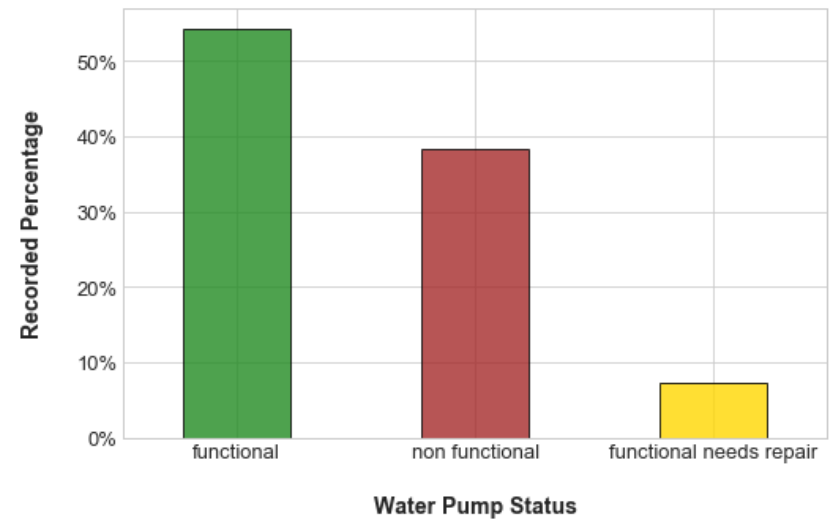
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THE SITUATION AT PRESENT...

- **Tanzania Population:** 58 million
- **24.6 million people** still live without clean water
- UNICEF estimates that **70% of Tanzania's health budget** is spent on preventable WASH-related diseases due to lack of access to clean water and improved sanitation

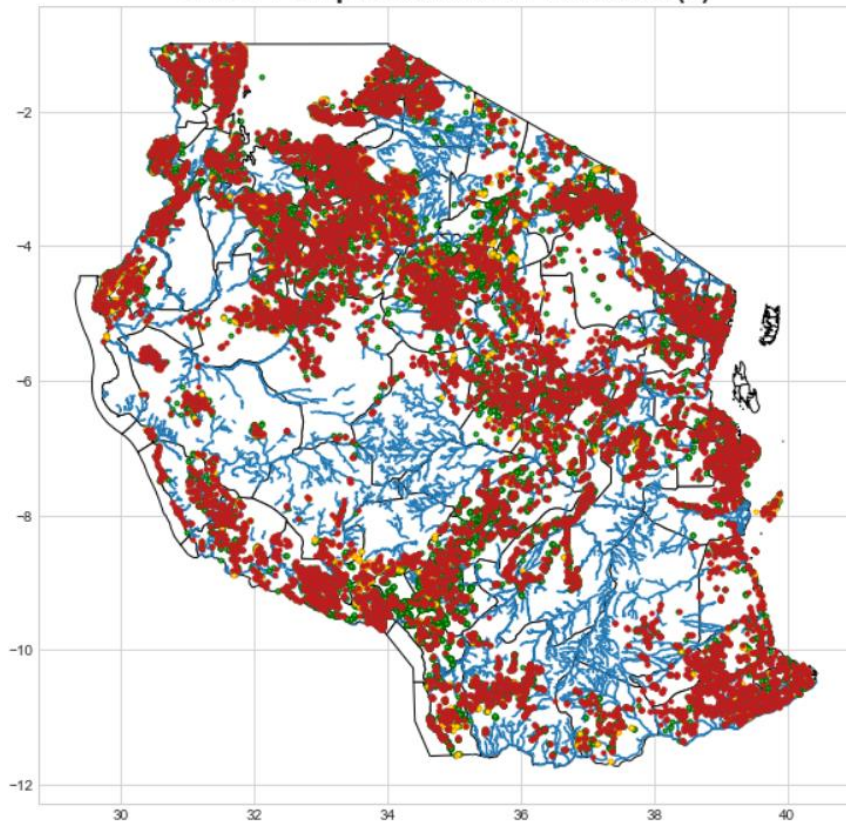


Water Pumps Functionality Status Spread

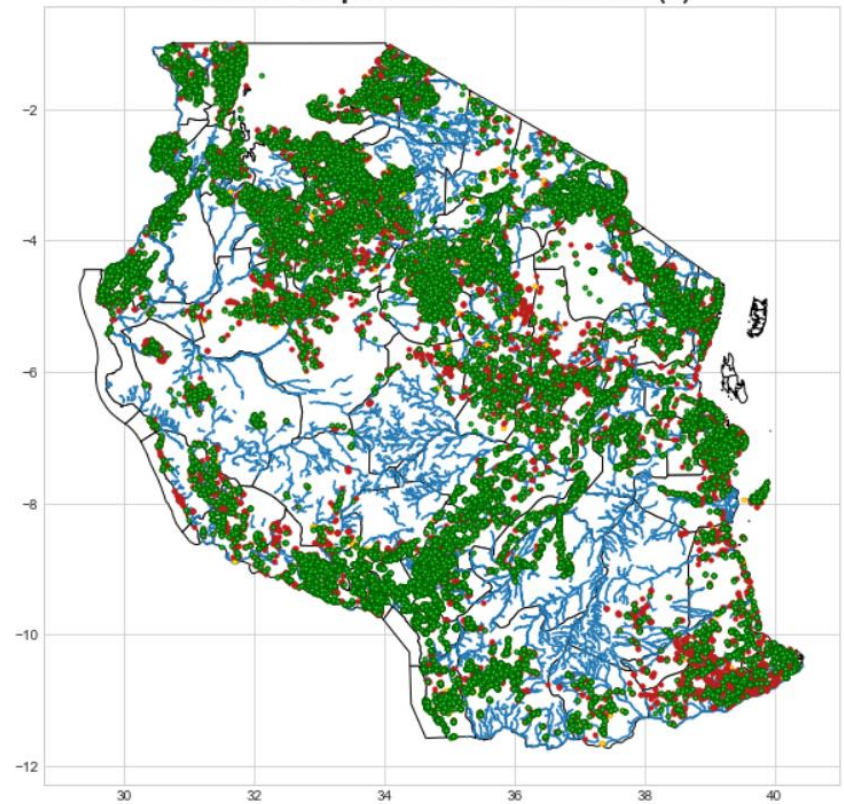


WATER PUMPS LOCATIONS

Water Pump Locations in Tanzania (2)



Water Pump Location in Tanzania (1)



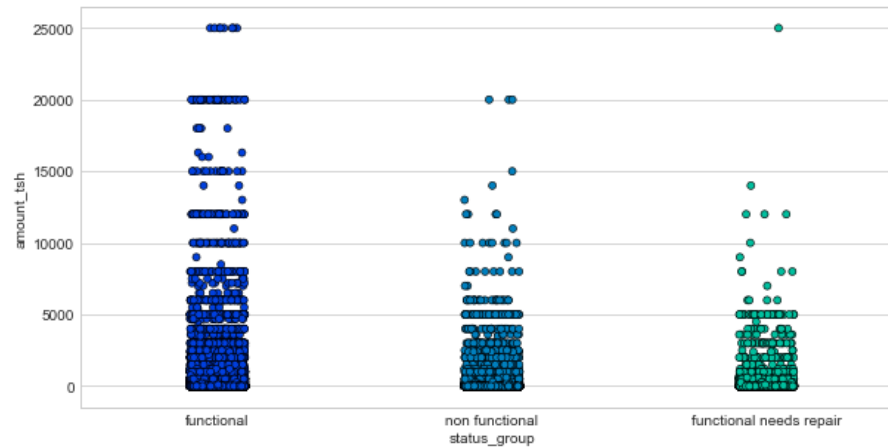
MODELING WELL FUCNTIONALITY

- Modeled Features include
 - Location (latitude, longitude)
 - Quantity of the water
 - Management
 - Extraction type
 - Frequency of Payment for water usage
 - Acquisition of Permit

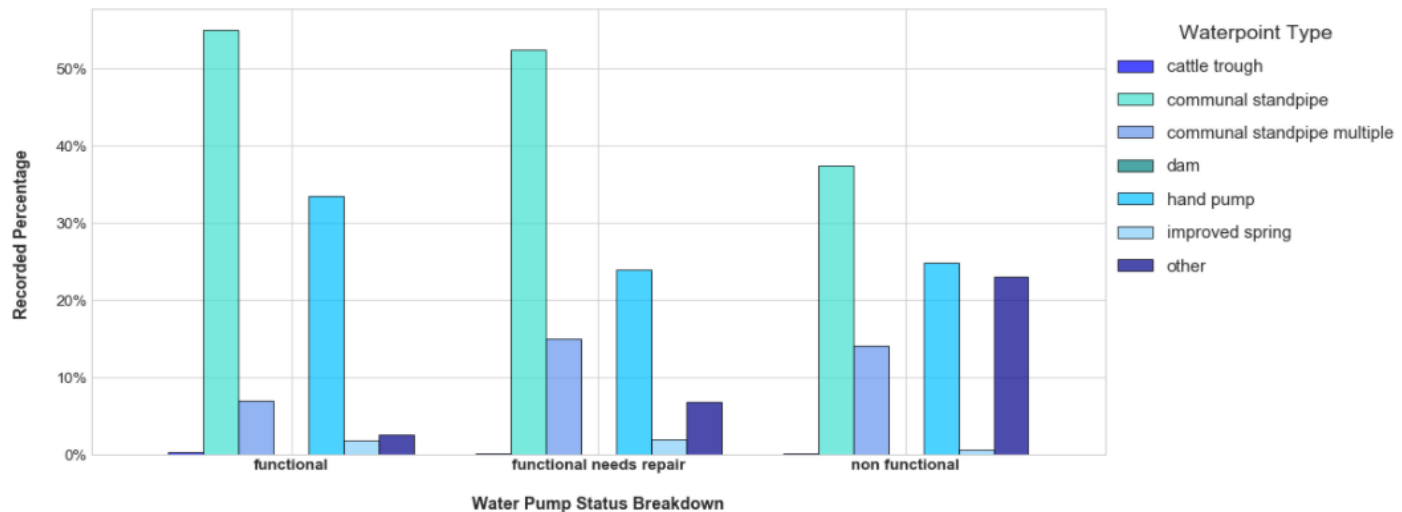
Findings: The final model has an accuracy of 76.3%.



EXPLORING DIFFERENT FEATURES



Waterpoint Type Spread by Functionality





RECOMMENDATIONS

- New water pumps should be built in locations with still significant amount of water, of a good quality in order to ensure their long-standing use.
- The location of the wells is an important aspect to their functionality, so focus funding on the development of new water distribution networks, especially in rural areas
- Examine the districts and local authorities in the regions with high concentration of wells without permits

FUTURE RESEARCH

- Narrow down model features along the following perspectives:
 - The natural resources perspective (focus on location, water quality and quantity, etc.)
 - The funding aspect -- breaking down further into management and operation practices, installation, etc., narrowing down to a selection of 'best practices' for well functionality and longevity.
 - Look at foreign investments -- With Tanzania's water & sanitation industry still heavily reliant on international and private sector donors, examine their impact on functionality.





FIND OUT MORE AT: <https://github.com/ANAUliANOVA/data-mining-water-pumps-in-tanzania>