Tanzania Ministry of Water

Ahmet Karaoglan

Project Server

Ahmet Karaoglan
Data Scientist
https://www.linkedin.com/in/ahmet-karaoglan-7267aa86/

OUR PROCESS

BUSINESS UNDERSTANDING

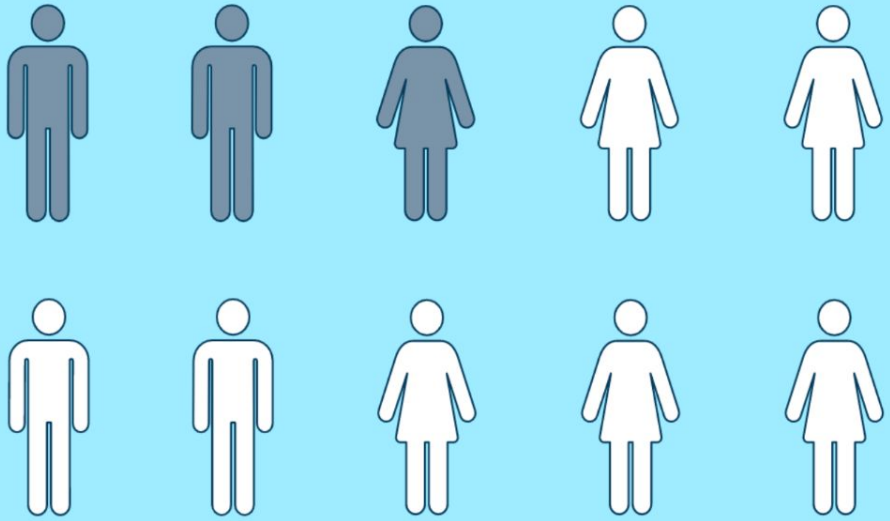
DATA UNDERSTANDING

MODELING

RECOMMENDATIONS

FUTURE

3 Out of 10 Do Not Have Access to Basic Drinking Water



According to the source, basic drinking water is that from an "improved source, provided collection time is not more than 30 minutes for a round trip, including queuing".

4 Million lack access to an improved source of safe water

Data Understanding

DRIVENDATA

Taarifa

2011 - 2013

Modeling

Predictive &
Inferential Models

MODELS

• • •

False Positives
Change Lives

PRECISION

• • •

Precision Score of
82%

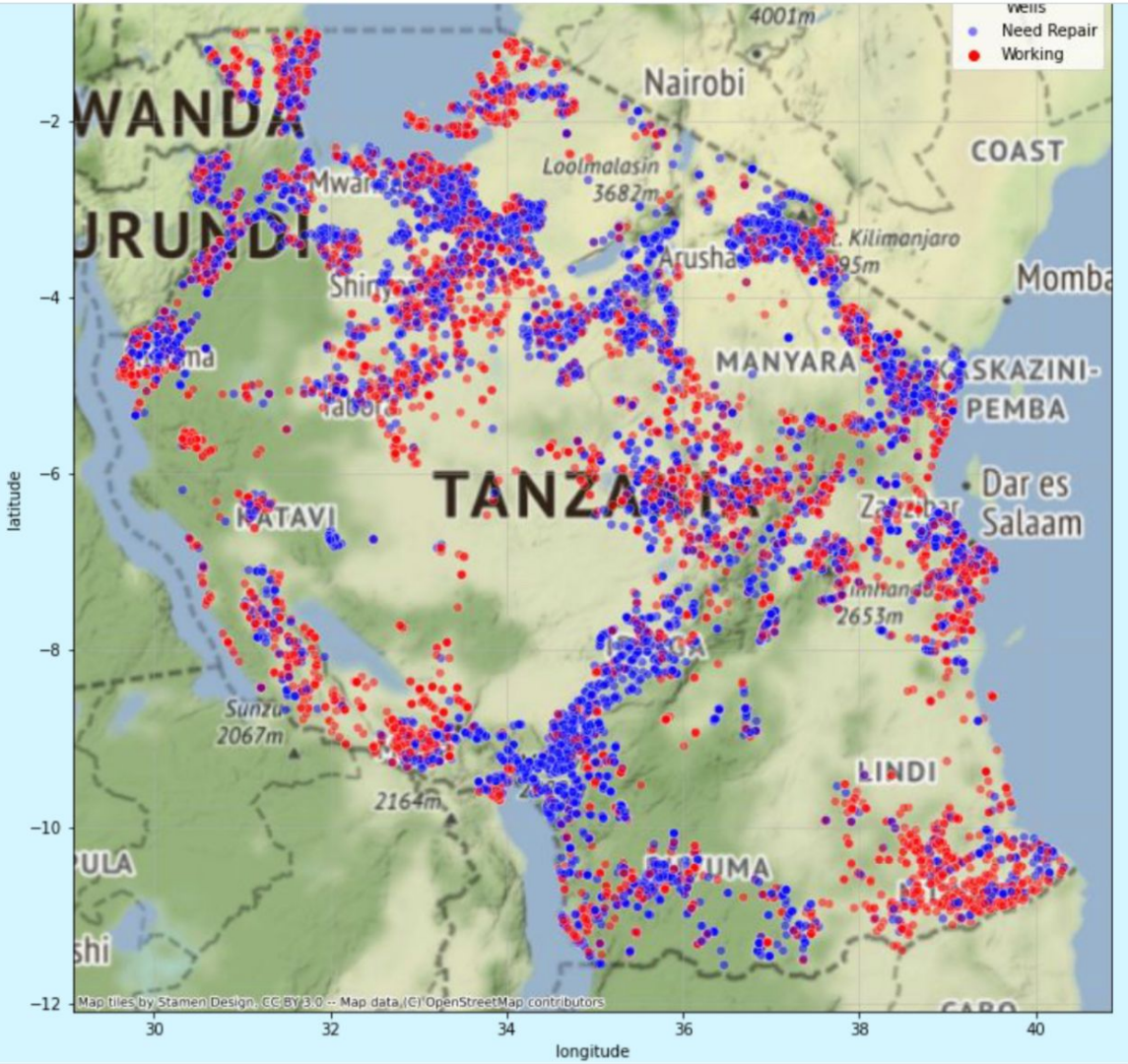
AGGREGATE RESULTS

• • •

Permits

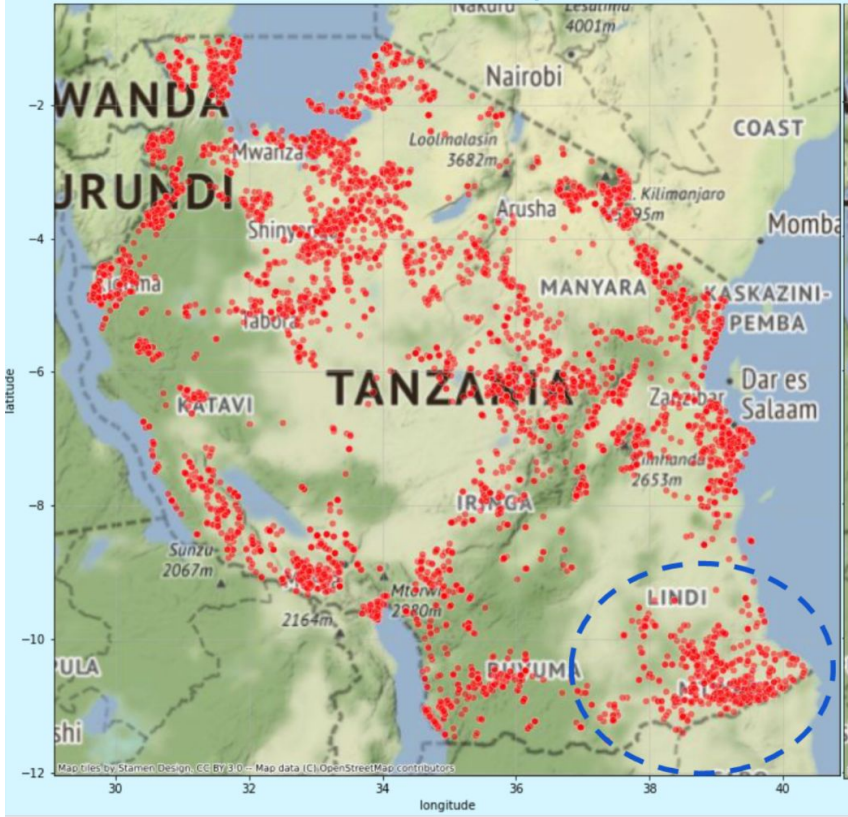
Wells with permits **2.1x** to be functional

Wells without permits **2.8x** to be in need of repair

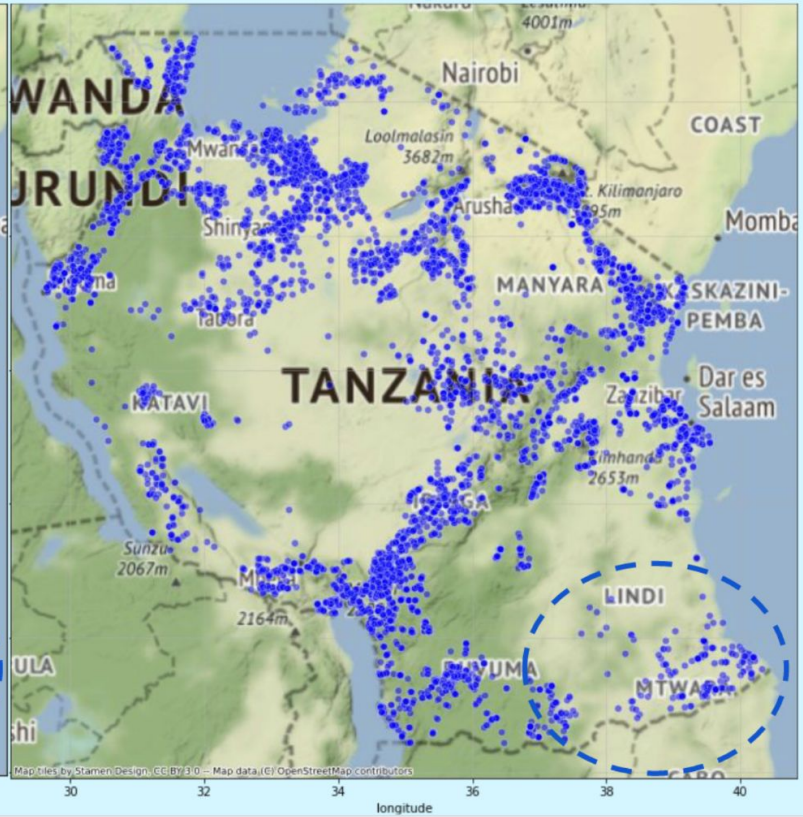

Wells
Need Repair
Working
Nairobi
COAST
Loolmalasin
3682m
Arusha
Momba
MANYARA
SKAZINI-
PEMBA
TANZA
Dar es
Salaam
Zanzibar
2653m
Sunzu
2067m
2164m
LINDI
Map tiles by Stamen Design, CC BY 3.0 -- Map data (C) OpenStreetMap contributors
latitude
longitude
−2
−4
−6
−8
−10
−12
30
32
34
36
38
40

Analysis

Wells in Need of Repair

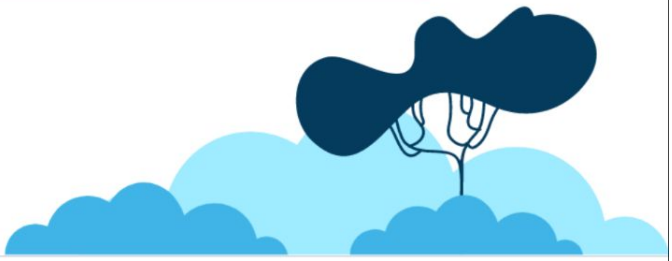


Functioning Wells



Recommendations

Location	Identify Wells	Permits
Higher Elevation is best!	Minimize resources spent	Save time and money



Future Research

- Implementation Cost
- Maintenance Cost
- Analysis for alternative solutions

THANK YOU

Ahmet Karaoglan
Data Scientist