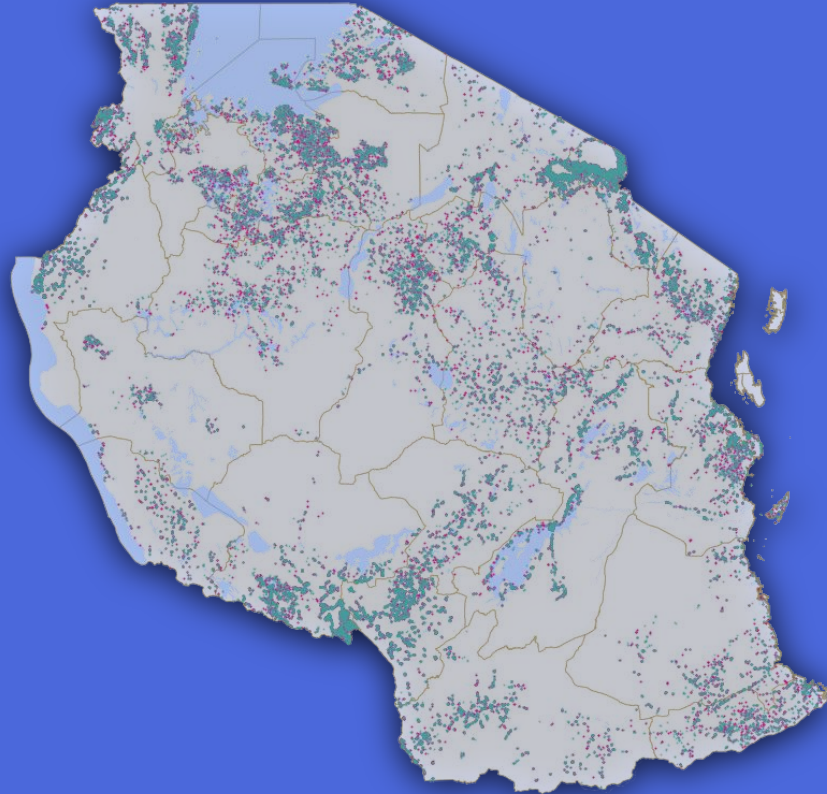




Predictive Modeling for Tanzanian Wells

Alex Marshall, Jennifer Cobb, Nick Indorf

Water, water everywhere?



Model Optimization

Misallocation
of labor

Populations
without water



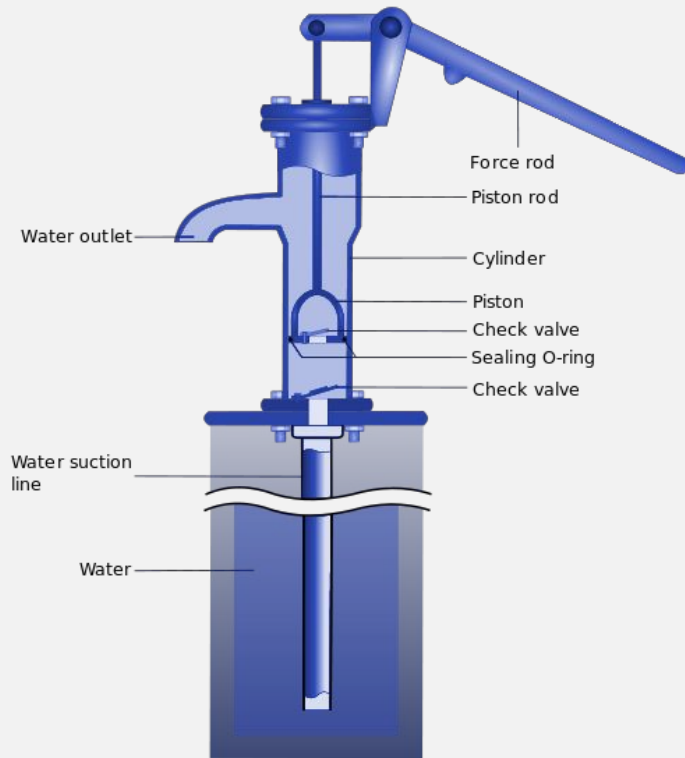
Process





Dataset Characteristics

- ~59,000 water pumps
- Collected between 2002 - 2014
 - From Ministry of Water & Taarifa
- 31 categorical, 9 numeric features





Data Cleaning

Column
Reduction

40 to 22

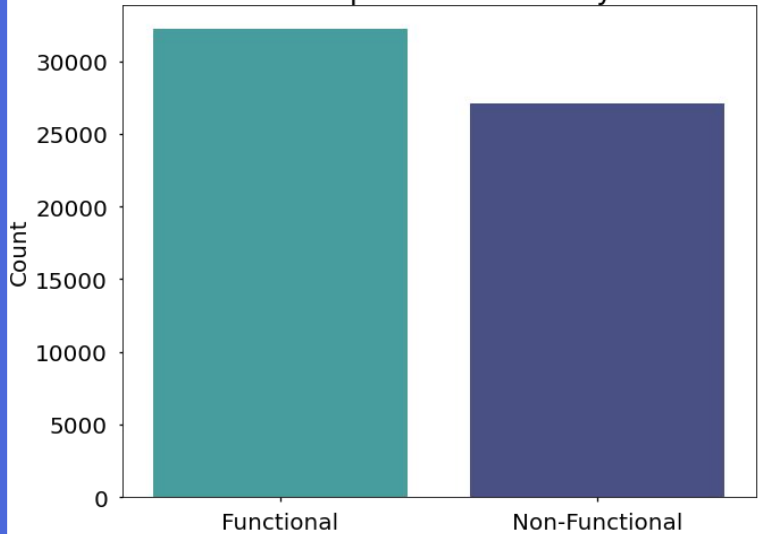
~24,000
points

Missing Information

Consolidate
Outcomes



Waterpoint Functionality

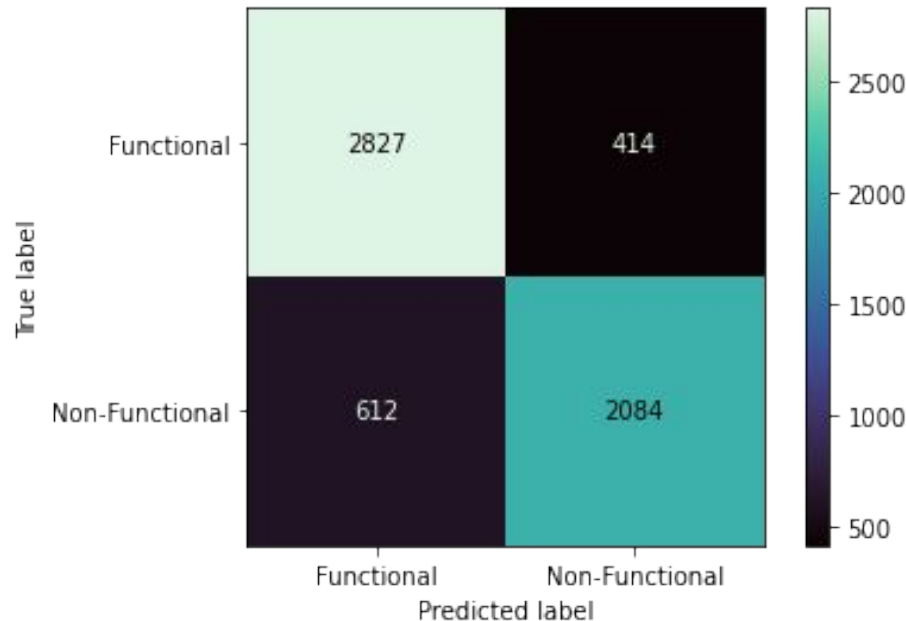




Modeling & Evaluation



- Based on Decision Tree
- 82.7% - accurate for all predictions
- 77.3% - accurate for truly non-functional
- 83.4% - accurate for predicted non-functional





Next Steps

- Revise data collection processes
- Integrate external geodata
- Expand number of classifiers in model

An aerial photograph of a vast landscape featuring a body of water, green fields, and a forested hillside. A large blue geometric shape, resembling a stylized diamond or a rotated square, is overlaid on the image. This shape has a thin orange border and contains the text "Thank You" in white.

**Thank
You**