

The background image shows a wooden pipe or channel discharging water over a rough stone wall. To the right, there is a black metal railing. The background is filled with green foliage. The text is overlaid on this scene.

# Tanzanian Water Pumps

Helping to ensure those in need  
have access to safe water

Presented By David Hartsman

A red metal bucket with a curved handle is hanging from a red horizontal pipe. The pipe is mounted on a red brick wall. The bucket is empty and has some blue paint visible on its side. The text is overlaid on the image.

**Tanzania is a nation of 59M  
people.**

**28% (16M) lack access to clean  
water**



# Our Problem

Finding a way to anticipate malfunctions in water pumps before they happen

Quicker repair means fewer people suffering from lack of access to water





## *Process:*

- **Data Evaluation**  
40 Feature Columns
- **Model Manipulation**  
Fine Tune Model Characteristics
- **Determine Best Model**  
Use Classification Metrics

# Strongest Contributing Factors:





# KYP: Know Your Priorities

	Best Overall Model	Over-Sampled Model
Functional	88%	65.7%
Needs Repair	19.2%	71%
Non-Functional	70.6%	68.7%
Total Accuracy	76.4%	67.2%

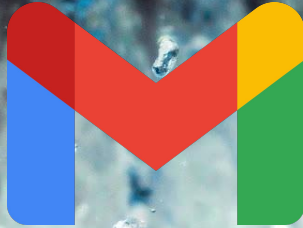
# Next Steps:

- Improve Data Collection
- Assess Cost of Repair vs Replacement
- Investigate Alternative Water Harvesting Technology





**Adopt our model, and  
help save lives!**



**Thank you for your consideration!**

