Tanzanian Water Pumps

Helping to ensure those in need have access to safe water

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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 Correlations:

Largest Correlation Items to Target

	Target
Quantity Dry	0.4
Waterpoint Type Other	0.31
Extraction Type Other	0.3
Quantity Enough	-0.26
Construction Year	-0.23
Payment Type Never Pay	0.17
Water Quality Unknown	0.17
Waterpoint Type Communal Standpipe	-0.17
Ward Other	0.14
Region Code 11	-0.14

KYP: Know Your Priorities

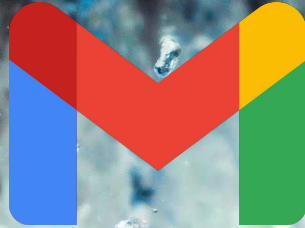|	Best Overall Model	Over-Sampled Model
Functional	88%	65.7%
Functional Needs Repair	19.2%	71%
Non-Functional	70.6%	68.7%
Total Accuracy	76.4%	67.2%

Accuracy of Predictions in Respective Models

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!