
Tanzanian Wells
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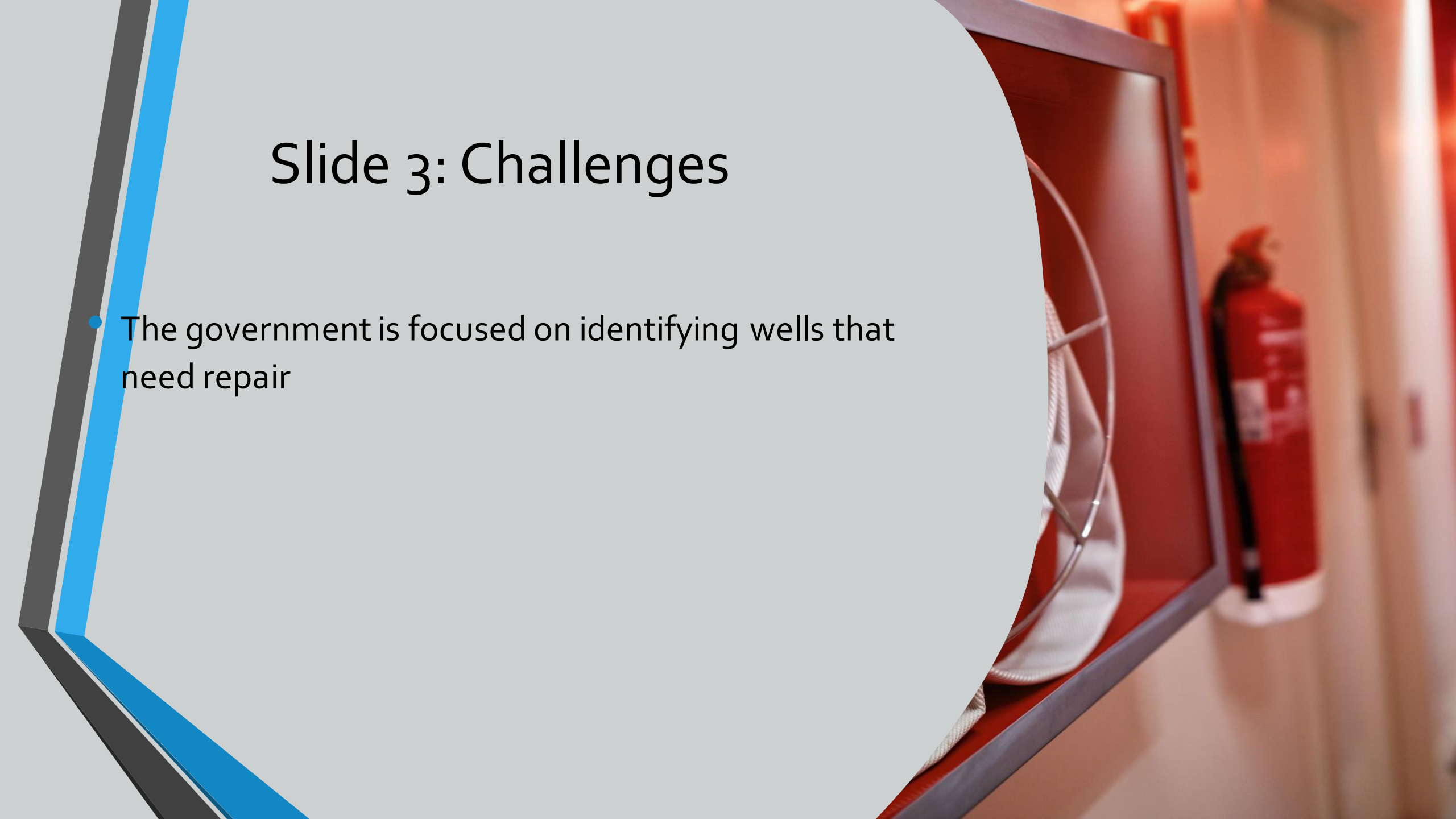
Introduction

- As a developing country, Tanzania struggles to provide clean and safe water for her citizens
- The population is over 57,000,000
- There are many waterpoints across the country
- Some of the water points need repair
- Others have failed altogether

Slide 3: Challenges

- The government is focused on identifying wells that need repair



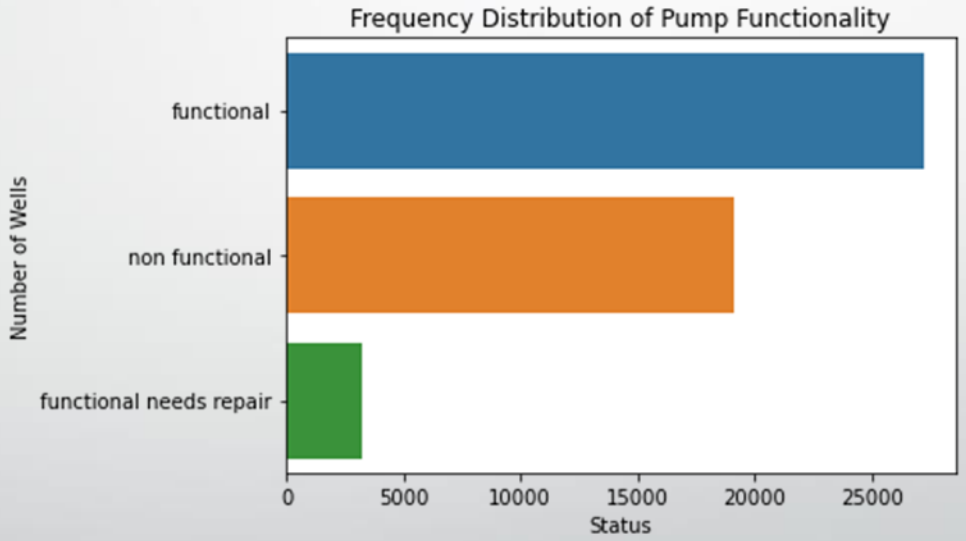
Problem Statement

Developing a model to predict the functionality of a water pipe

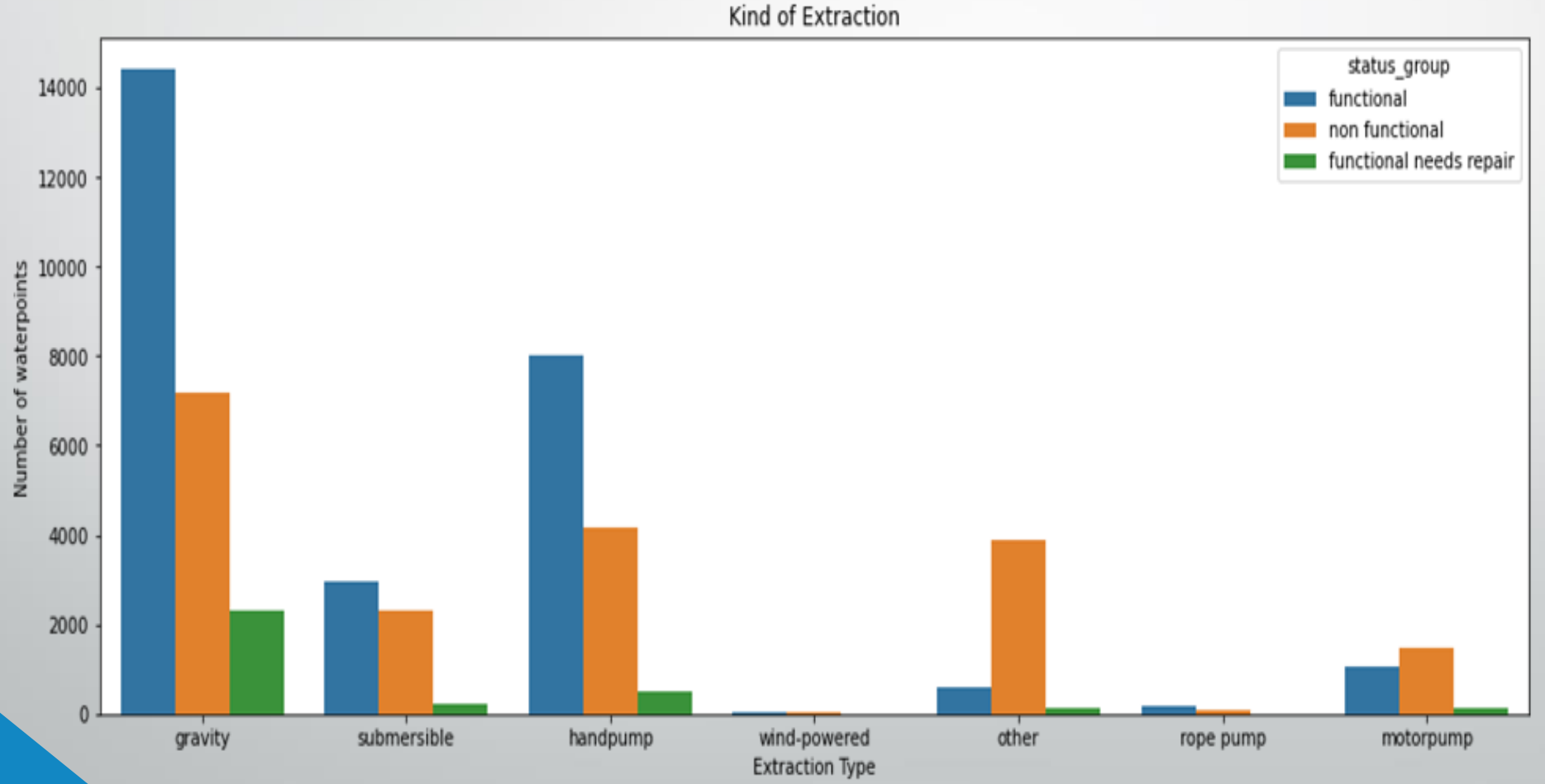
Objectives

- To identify the characteristics of water pumps working correctly
- To identify the characteristics of failed water points
- To predict whether the water pump is working correctly

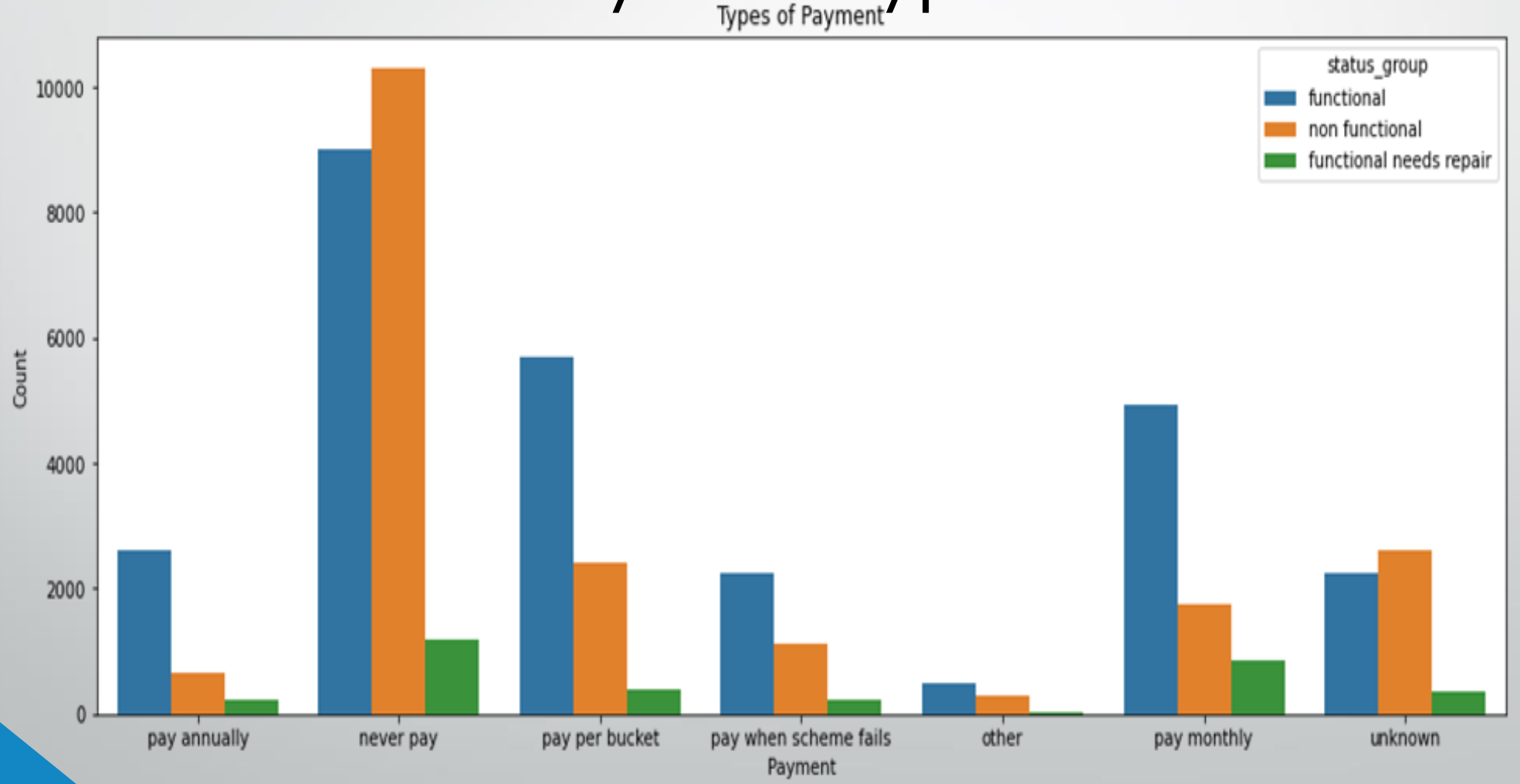
Pump Functionality



Water Extraction



Payment Type



Modelling

Model	Training Accuracy	Test Accuracy
Logistic Regression	73.75%	
Decision Trees	83.34%	76.99%
Random Forest	79.37%	79.31%
X Boost	83.63%	79.48%

Slide 10: Conclusion

- Most functional water pumps are powered by gravity and handpump
- Most pumps where the consumers don’t pay for water are non-functional
- Most pumps drawing from shallow wells and rivers/lakes are non-functional
- The need for machinery might explain the nonperformance of these pumps

Slide 11: Recommendation

- Future work should improve the quality of data to account for characteristics missed by the above models