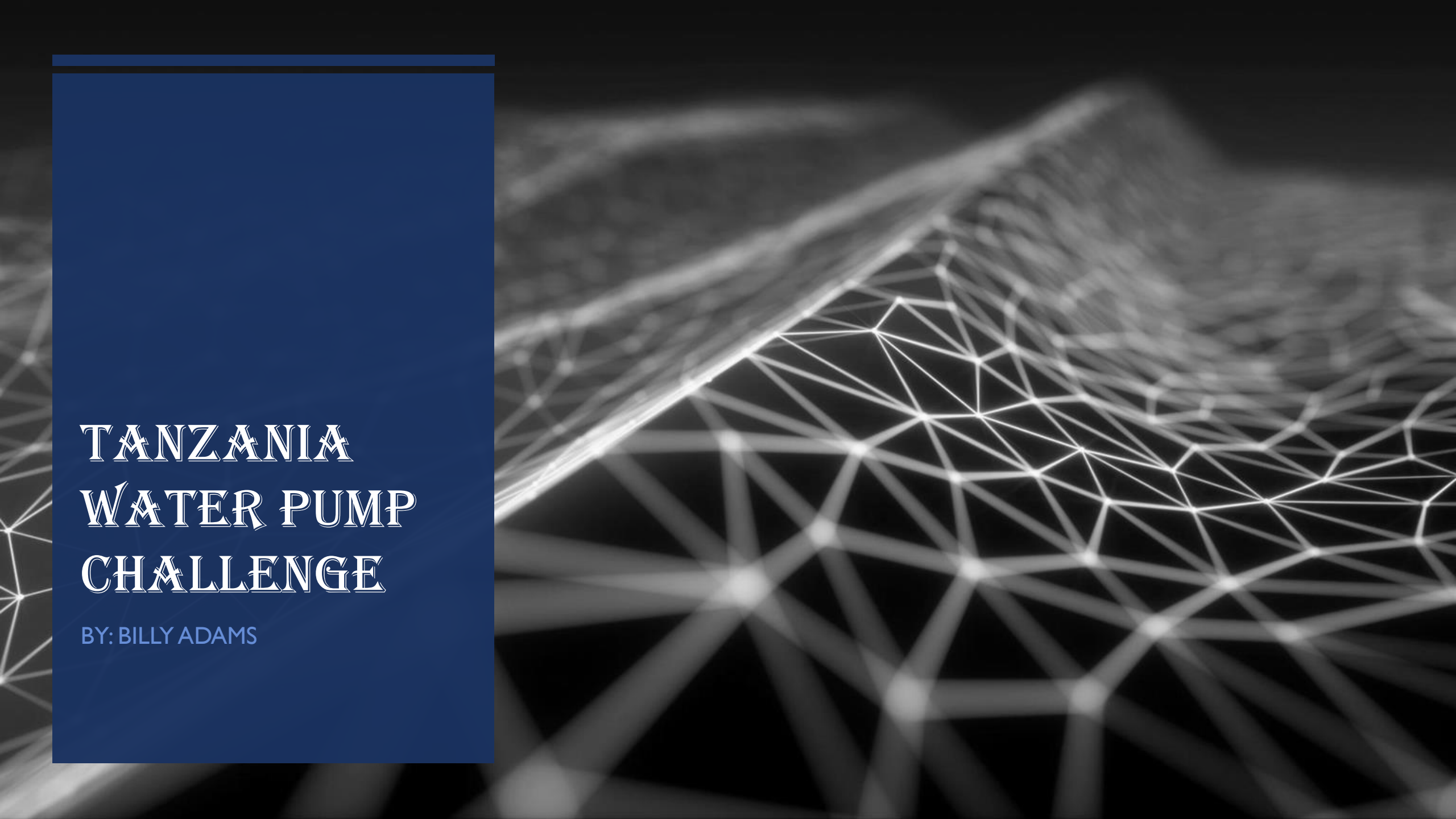


TANZANIA WATER PUMP CHALLENGE

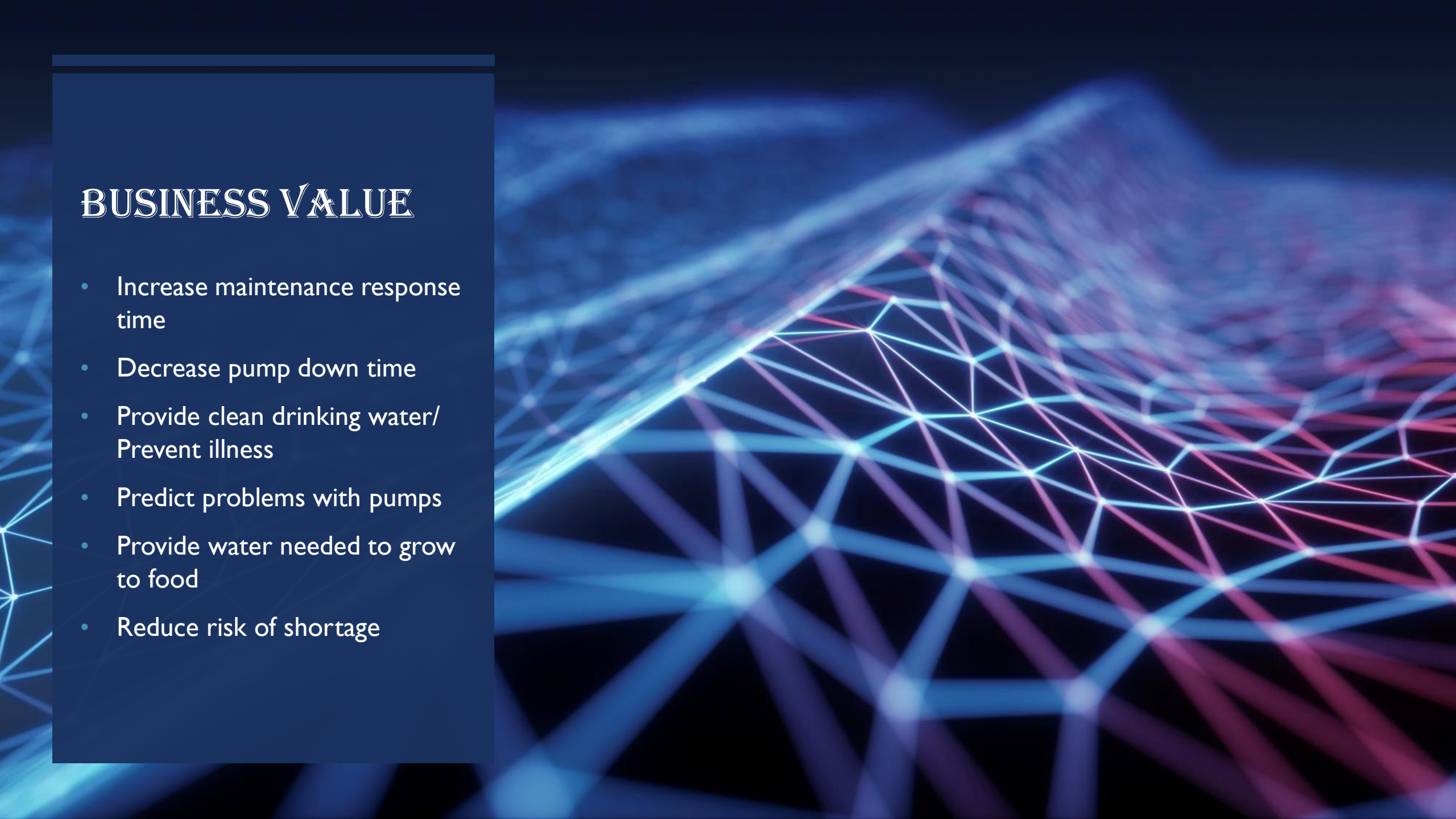
BY: BILLY ADAMS

PROBLEM STATEMENT

- Which pumps are functional?
- Which pumps need repair?
- Which pumps are non-functional?

Business Value

- Increase maintenance response time
- Decrease pump down time
- Provide clean drinking water/ Prevent illness
- Predict problems with pumps
- Provide water needed to grow to food
- Reduce risk of shortage



METHODOLOGY

- Data cleaning
- Feature engineering
- Logistic Regression
- K Nearest Neighbor
- Decision Tree Classifier
- Adaboost Classifier
- Stochastic Gradient Descent
- Naïve Bayes
- Neural Network

FINDINGS

Top 3 models:

- KNN – 76%
- Neural Network – 75%
- Decision Tree – 70%

FUTURE WORK

- Time series – Compare the status of pumps in different seasons and if the political state has any effect on the status of the pumps
- Different feature engineering/extraction
- Collect data on road conditions


THANK YOU