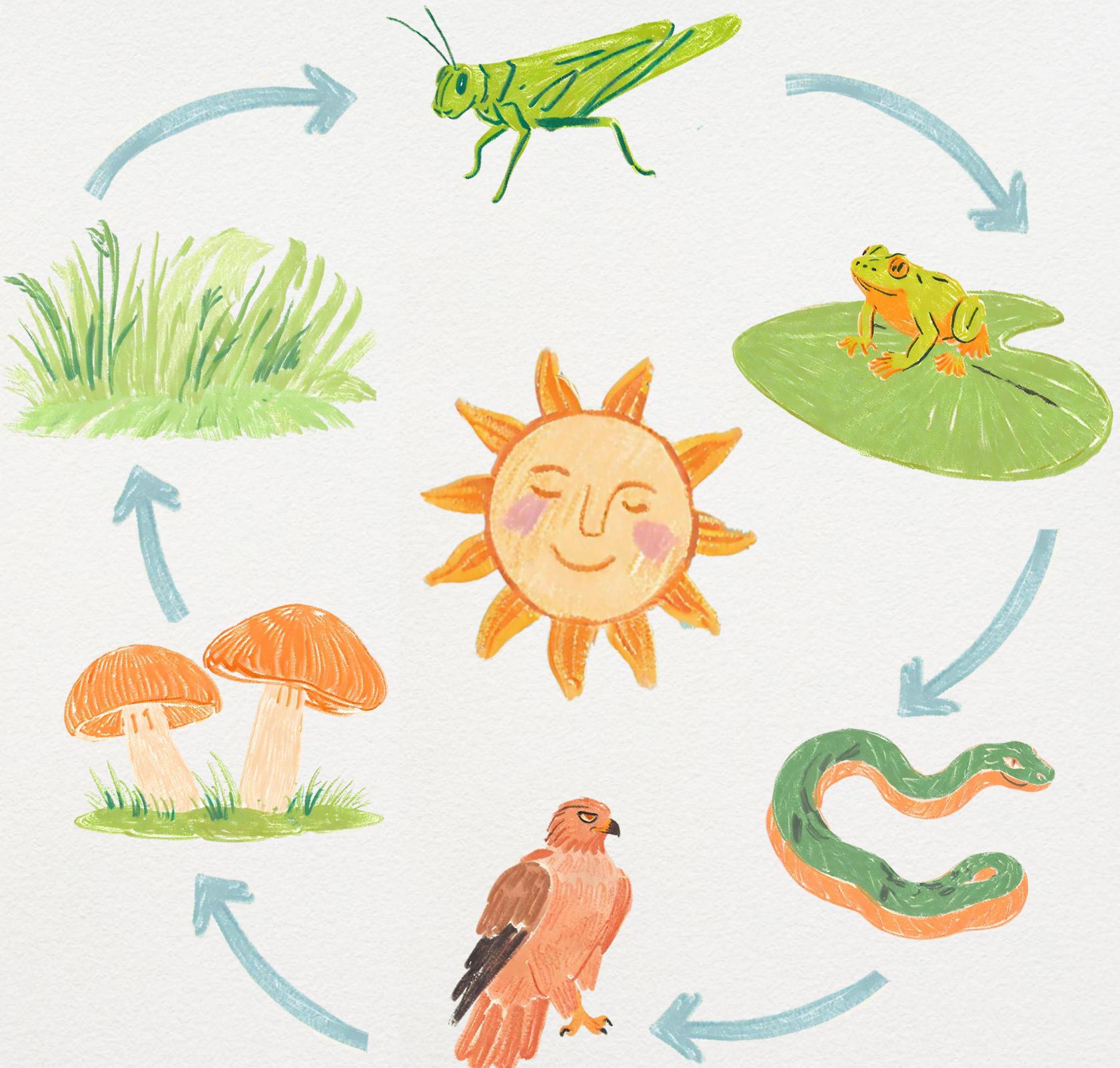


Water Wells in Tasmania

By Jared Lilly



Overview

Provide recommendations for the board of a non-profit for fund waterwells to the Republic of Tasmanian peoples

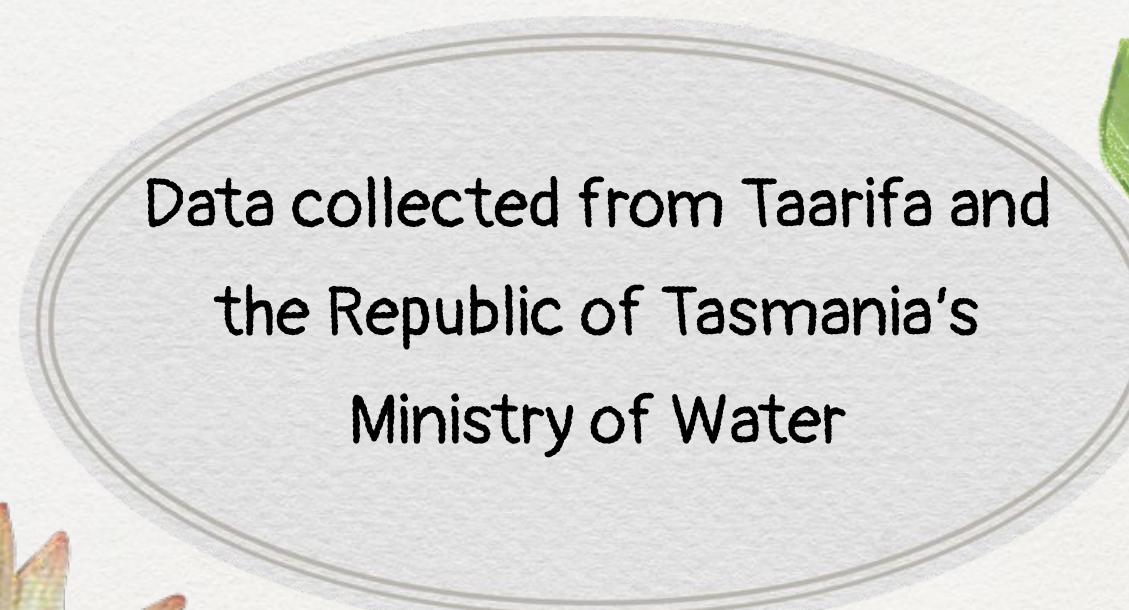
Predict whether a water well is functioning



Business and Data Understanding



Data gathered for a competition
by Driven Data



Data collected from Taarifa and
the Republic of Tasmania's
Ministry of Water



Types of Data

Data Contains: 59,400 rows and 40
columns such as:

- Construction year
- Installation
- Water Sources
- etc.

Three Models were employed



Logistic
Regression



Decision tree



Random Forest



The Winner:



modified Decision



Tree





Data Modeling Evaluation

Correctly predict if a Water Well is functional or not
functional 73% of the time

Model is more resistant to **overfitting**, and class **imbalances**





Recommendations

Using this model 3 recommendations going forward

Fund New Wells



Installed by
DWE
In the the
Tabora, Dadoma,
Mara, Rukwa and
Lindi Regions

Maintenance and Repair



Wells Older
than 2000

Natural Resources



Springs,
Rivers, and
Lakes

Avoid dams



Next Steps

Use Model

To optimize resource allocation to help the Tanzanian people

Focus on long lasting clean water wells



Trees



Algae

Thank You

Questions?

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Oa2415b/

