Product Description

**Features**

The Drought Management Product [maybe come up with a name for the system] includes several key features, namely **satellite-informed data, machine learning models,** and **a frontend** that users will interact with to extract value from the system.

The **Satellite Data Integration** component will be pulled from APIs provided by reputable space agencies. These will provide data about the state of vegetation over time, including the land’s health as well as the water’s availability. This data will then be made available to machine learning (ML) models to make drought predictions.

The ML models consumes historical and current data to make future predictions on the state that the vegetation will be in. These models will extract features from the system’s database, feed them into the model’s algorithms. This data will then be made available to the middleware which will, in turn, provide it through APIs to the web frontend.

The frontend website will contain visuals and a prediction module that will inform users on the land’s state broken down into water availability and weather conditions, and provide assumptions on what drought conditions are likely to look like in the future.

The aim is to provide usable data in an easy-to-understand interface that will allow stakeholders to make informed decisions.

**Competitive Comparison**

A few competitors exist, namely, African Drought Monitoring and Advisory (ADMA), The African Flood and Drought Monitor (AFDM), East Africa Hazards (ICPAC). AFDM was developed by Princeton and provides drought warnings across Africa. ICPAC does the same, only it is exclusive to the East Africa region. Our offering is similar to the above companies, except it uses AI to improve prediction accuracy.

**Pricing**

Our product will be offered for free initially, and if it scales, we will introduce a subscription model for users which will include additional features.

**Product Lifecycle**

We are currently in the ideation phase and are yet to develop the full system. After ideation, a prototype will be constructed, presented, and based on feedback received, the complete system will be built and presented to the product owner.

The team consists of developers who will meet consistently throughout a few months. Continuous development will occur and the technical deliverable will be worked on based on the scope defined in the technical description section of this document. It will then be marketed and shipped upon completion.

Improvement and maintenance will happen as necessary, depending on the success of the final deliverable.

**Distribution**

The product will be electronic and won’t have stringent distribution requirements. Upon completing the system, our developers will be contracted as periodic contractors in charge of managing the different repos and conduct continuous integration and development based on the product owner’s requirements.