KE-EXPO CROP RECOMMENDER

Group Members

1. Brian Omondi – 1045858
2. Batholomew Nyongesa – 1046075
3. Emanuel Cheruiyot – 1045190
4. Erick Mboya – 1040540
5. Angella Mwende – 1040453
6. Peter Mutugu – 1046062
7. Karlson Kipkirui – 1046027
8. Allan Kibet - 1045837

About

This project uses data science to optimize crop recommendations for Kenya's agricultural export sector, predicting/recommending ideal crops for planting considering farmers' prevailing environmental conditions thus enhancing Kenya's export success.

Data Acquisition, Data Cleaning Visualization and Model Training

Initially we had planned to get the data from FAOSTAT and KilimoSTAT APIS but even after several attempts the APIS lacked the data required for the Model training thus we settled for India based data from Kaggle (https://www.kaggle.com/datasets/atharvaingle/crop-recommendation-dataset) of which the crop data used had favorable conditions too that matched the Kenyan key export crops like Tea, Coffee, etc.

1. For first data cleaning we mapped the crops and replaced them with Kenyan crops
2. Further necessary data cleaning on the new "Kenyan crops data"
3. Data Visualizations
4. Model training (Using Random Forest Algorithm)
5. Stored the Trained Model
6. Developed a user Interface to allow the farmer to easily interact with the model using R Shiny library
7. Deployed the Shiny app to shinyapps.io