Question 1: As a part of the implementation of the Agroforestry program, we collect multiple farmer details. Like their name, location details, Total area they have, how much area they are giving for the plantation, document uploading status, dates of different activities. This data looks similar to dummy data created here. 1. Many times we have observed that there are multiple data errors in the entered data. So, can you develop the data quality test cases, based on below program details. a. We identify the farmer and ll in the initial details. b. We check the details like, water availability, electricity availability and decide to onboard the farmer and collect the payment. c. Then we do the carbon credit training and contract with the farmer. d. Distribution of the plant and drip is done after contract. e. Plantation of around 350 to 450 trees is done after the sampling distribution. 2. It is important for our Field Manager to get the eld updates in real time, e.g. Amount of area identied, amount of plantation done, amount of data collected etc. So, create real time end to end data visualization/ dashboard connecting to above data. Instead of connecting directly to the above link, initially download the google sheet, upload it in your drive and then connect it to the dashboard. Make sure that, Data Quality checks you prepared above are part of this pipeline.

Dashboard Presentation

(Link for video Description : Video Description)

Scan the code for Power Bi interactive dashboard

First of all I would like to thank the F4F team for shortlisting me and giving me the opportunity..let's start .

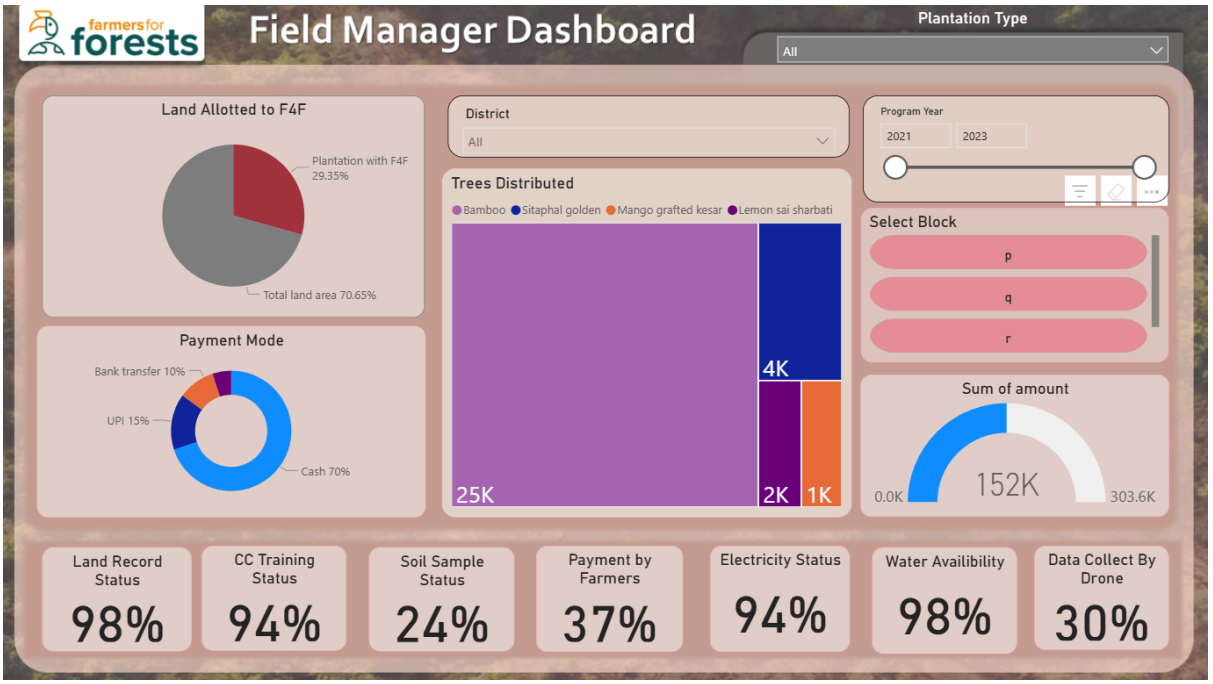
I'm excited to present the interactive Power BI dashboard I developed for the F4F Agroforestry program.

It is very important that the field managers should get the field updates in real time. As Activities of field managers involve several stages , Managing and tracking these activities generated a vast amount of data that needed structured monitoring and validation.

Let's start with the first part . data quality challenges. In short data cleaning, I implemented various checks.. have done standard data cleaning and observed one thing that the farmer ID number 3 and farmer ID number 49 has allotted more land to f4f for plantation then they

hold for example, former ID number 3 has allotted 30 acres of land and this ID holds only 8 occurs of land so this kind of error instead of deleting it I manipulate this data…

The dashboard.. It offers comprehensive insights through dynamic visuals. For example, the land allotment pie chart shows the percentage of land dedicated to plantations, while the payment mode donut chart highlights transaction trends. The treemap visual displays tree distribution by type, and key indicators track essential metrics such as land record status, water availability, payment collection, and plantation progress. A financial progress gauge tracks the program's monetary milestones, enabling field managers to stay on top of their targets.



To ensure real-time updates, I built a robust data pipeline by extracting data from Google Sheets, enforcing data quality checks, transforming the data, and automating dashboard refreshes in Power BI. This setup empowers field managers with accurate, up-to-date information, enhancing operational efficiency and data-driven decision-making.

In conclusion, this project highlights my ability to create interactive dashboards, implement data pipelines, and ensure high data quality standards. I am confident that these skills can contribute to your organization's goals.

Thank You ,

Looking Forward

Rohit Raut (email : rohithraut7350@gmail.com)

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