- Clean_coffee_2008.ipynb: Cleaning the first batch of coffee quality data
- Clean_coffee_data_2023.ipynb: Cleaning the second batch of coffee quality data
- Clean_coffee_data_2025.ipynb: Cleaning the second batch of coffee quality data
- Coffee_bot_scrapper: Directory that hold python code that scrapper coffee quality data from CQI and converts it into csv files
- LSTM.ipynb: Over 10 LSTM and few BI-LSTM models using PyTorch for Coffee
- Random_forest.ipynb: Initial testing of different tree based models and fine tuned random forest model to improve results for coffee
- Resnet.ipynb: resnet model in PyTorch for coffee
- Wrapper.ipynb: The best performer for Coffee data where the XGBoost is wrapped inside PyTorch neural network
- Xgboost.ipynb: xgboost and xgboost stacked model for coffee
- ClimaSense UI: this directory holds the React app of the Dashboard we built. Inside there is a readme.md file that explains how to run it

- Coca_Quality_Prediction_Final.ipynb :cleaned and merged cocoa flavor and climate data, generated synthetic quality samples using a Conditional GAN, and trained models including TabNet, XGBoost, and LightGBM to predict cocoa quality ratings.

- Cocoa_Yeild_Prediction_Final.ipynb : *combined cocoa yield, climate, and flavor data, created synthetic yield samples using a Conditional GAN, and trained models like TabNet and XGBoost to predict cocoa yield more accurately.*
- Cocoa_first_file.ipynb: Cleaned cocoa data, applied target encoding and scaling, generated synthetic samples using CTGAN, and trained models like XGBoost, Random Forest, TabNet, LSTM, GRU, and a stacking regressor. Evaluated results using R^2 and MAE with visual plots.