AI CERTs™

AI+ Foundation™

Certification

AI + Foundation

Module -1

Hands-On 3:

Title: Classifying Emails with Machine Learning.

Problem Statement:

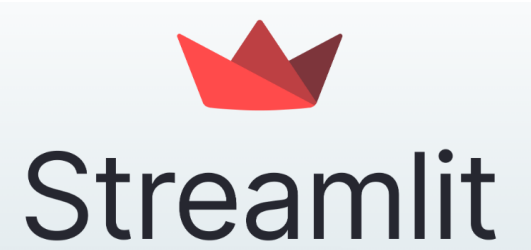
You are working as an intern at a tech startup that wants to create a machine learning model to automatically classify incoming emails as "Important" or "Not Important." Your challenge is to build a basic supervised learning model using a dataset of sample emails. Identify key features, train the model, and evaluate its performance. Then, discuss how the model would differ if you approached it using an unsupervised learning method like clustering.

Objective:

To develop and evaluate a supervised machine learning model that classifies incoming emails as "Important" or "Not Important" based on key textual and metadata features, and to compare this approach with an unsupervised learning method such as clustering, highlighting the differences in methodology, assumptions, and outcomes for email classification.

Tools to be used:

1. Interactive dashboard Using Streamlit



Steps to be followed in Detailed manner:

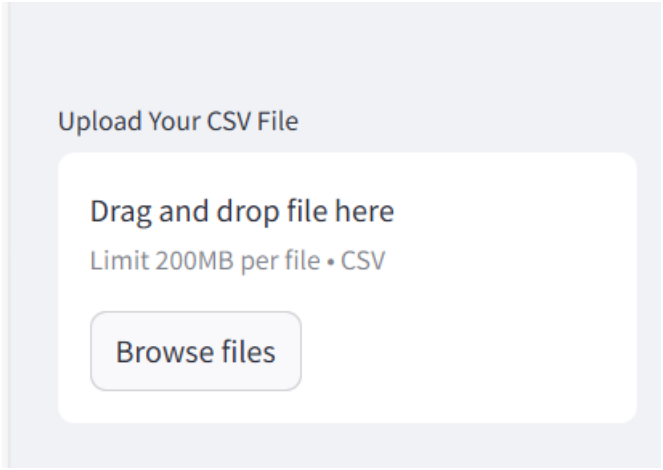
Step-1: Now upload the dataset provided here:

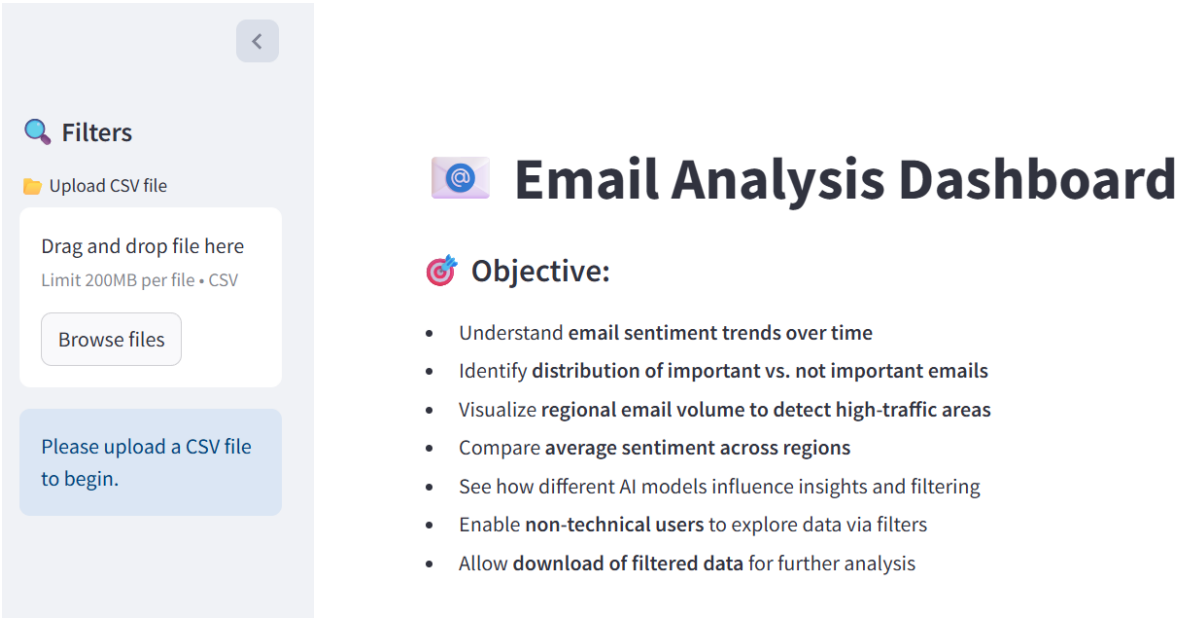
https://drive.google.com/file/d/1YgiYXgGoFanDo1Pz6xFT84Ep7-9rlKfv/view?usp=sharing

Step-2: Click the link below and upload the dataset file as provided in each module section.

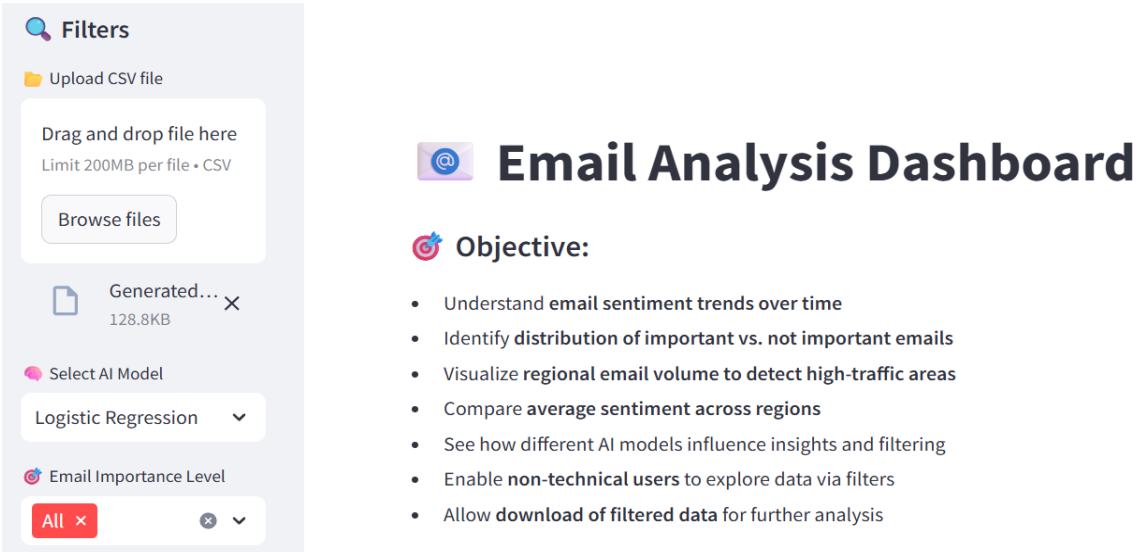
https://interactivedashboard.aicerts.ai/AI_Foundation_Lab_1_Email_Analysis

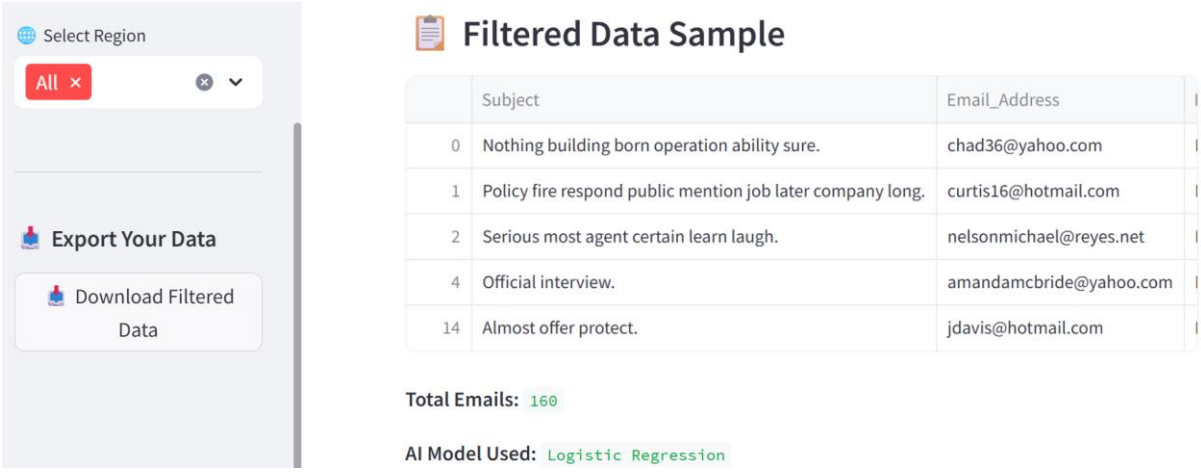
Sample Output:



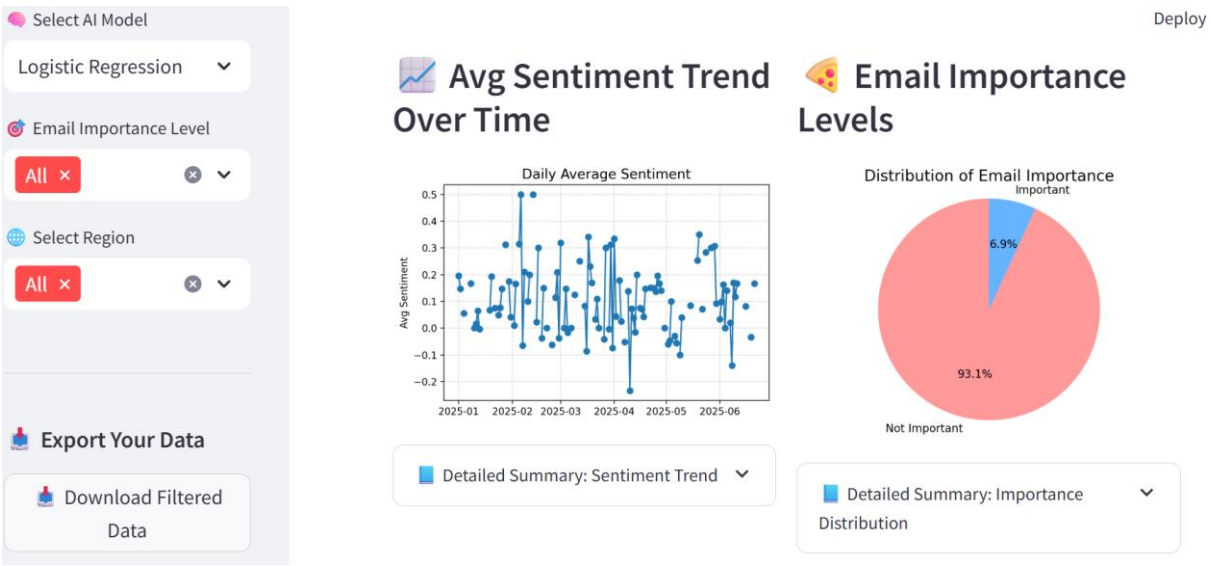


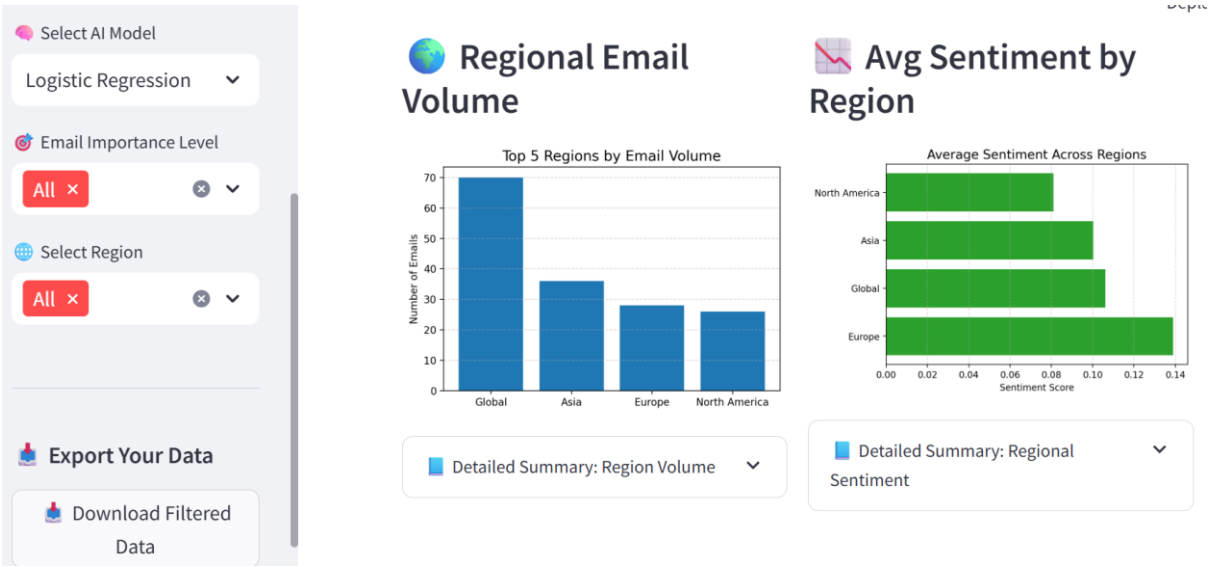
- Now the check the dashboards with all the filters on the left-hand side





- Now, Apply the different AI model, Email Importance level, Region that are used as filter.





💡 Key Insights at a Glance

- 🚀 The region with highest volume is **Global**
- 😊 Most positive region: **Europe**
- ⚖️ Overall average sentiment score: **0.11**
- 📬 Important emails: **6.9%** of all emails
- 🔍 Total emails analyzed: **160**

> Use these insights to refine communication strategies or filter out unimportant messages.

Contact

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