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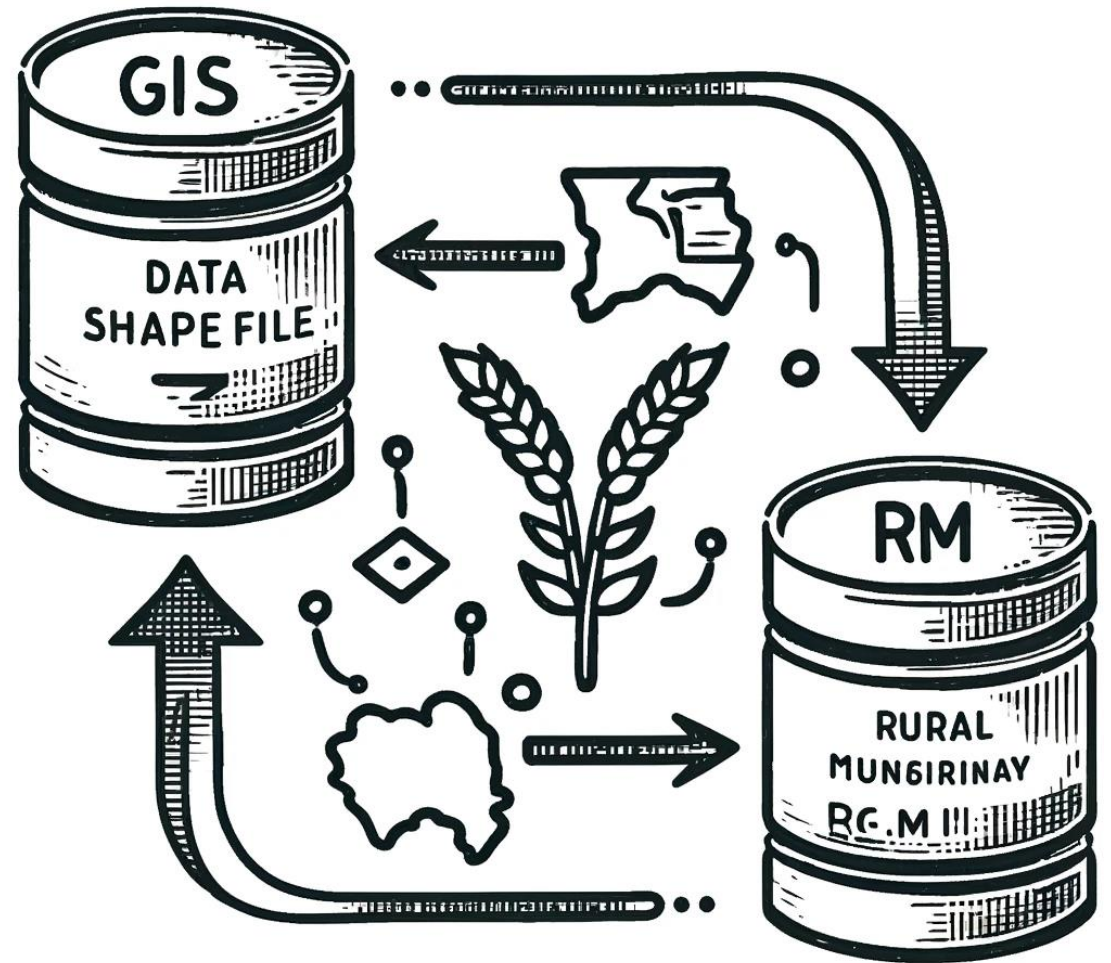
# Crop Yield Analysis and Clustering

Data Analysis and Clustering for Rural Municipalities

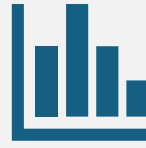
Adel Baabbad

# Data Collection

- RM Shape File GeoHub
- Crop Yields by Rural Municipality (R.M.)



# Exploratory Data Analysis (EDA)



UNDERSTANDING DATA  
STRUCTURE AND  
CONTENTS



IDENTIFYING DATA QUALITY  
ISSUES



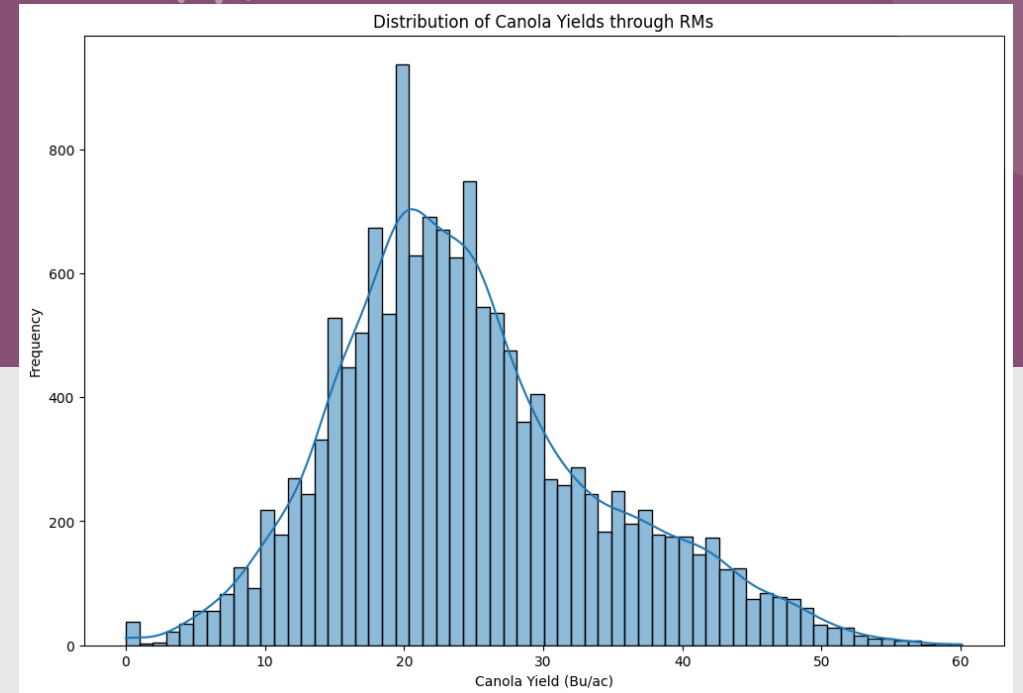
SUMMARIZING KEY  
CHARACTERISTICS



DETECTING AND  
UNDERSTANDING  
RELATIONSHIPS

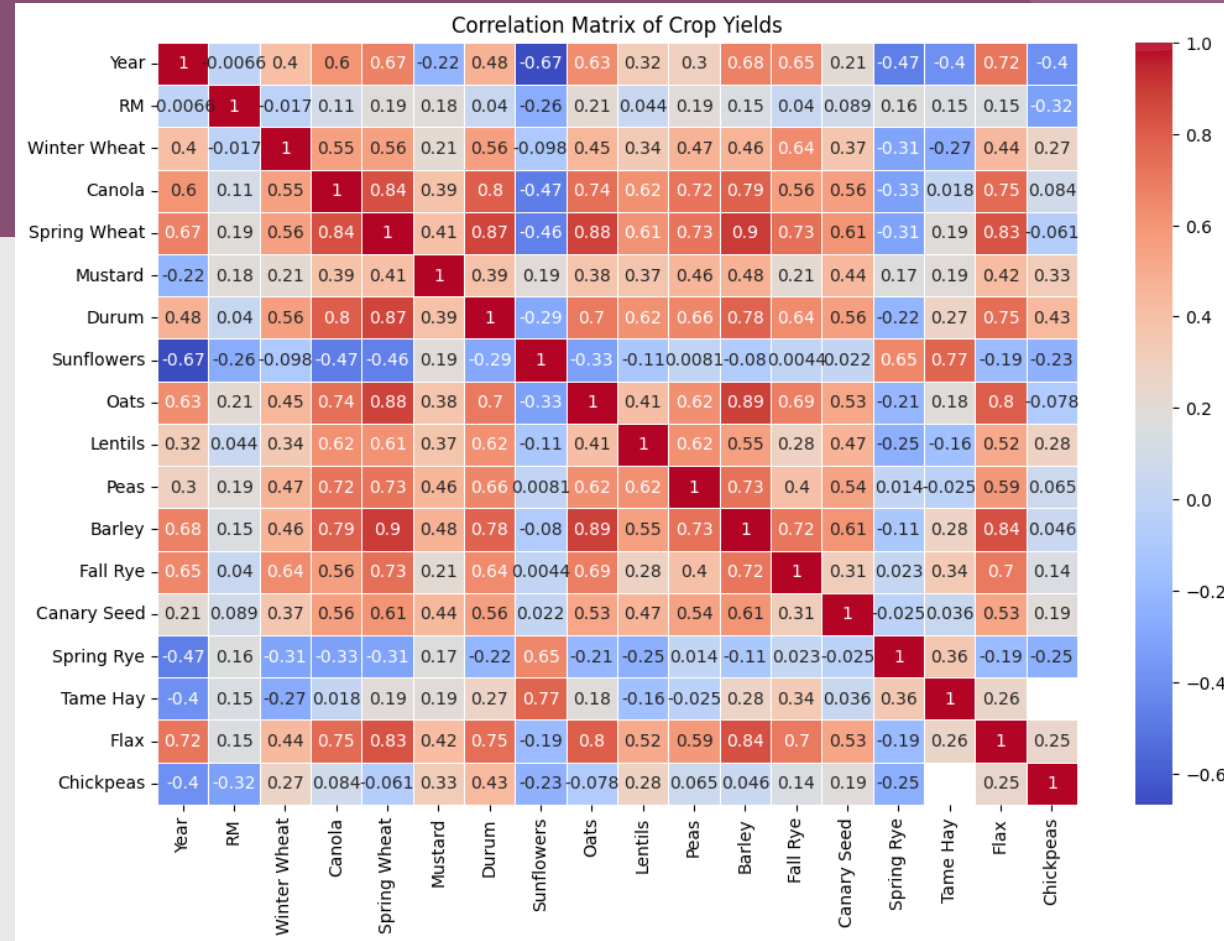
# Yield Distribution Through RMs

- This plot shows the distribution of Canola yields across different Rural Municipalities.



# Correlations Between Crop Yields

- This heatmap visualizes the correlations between different crop yields, helping us understand interdependencies.

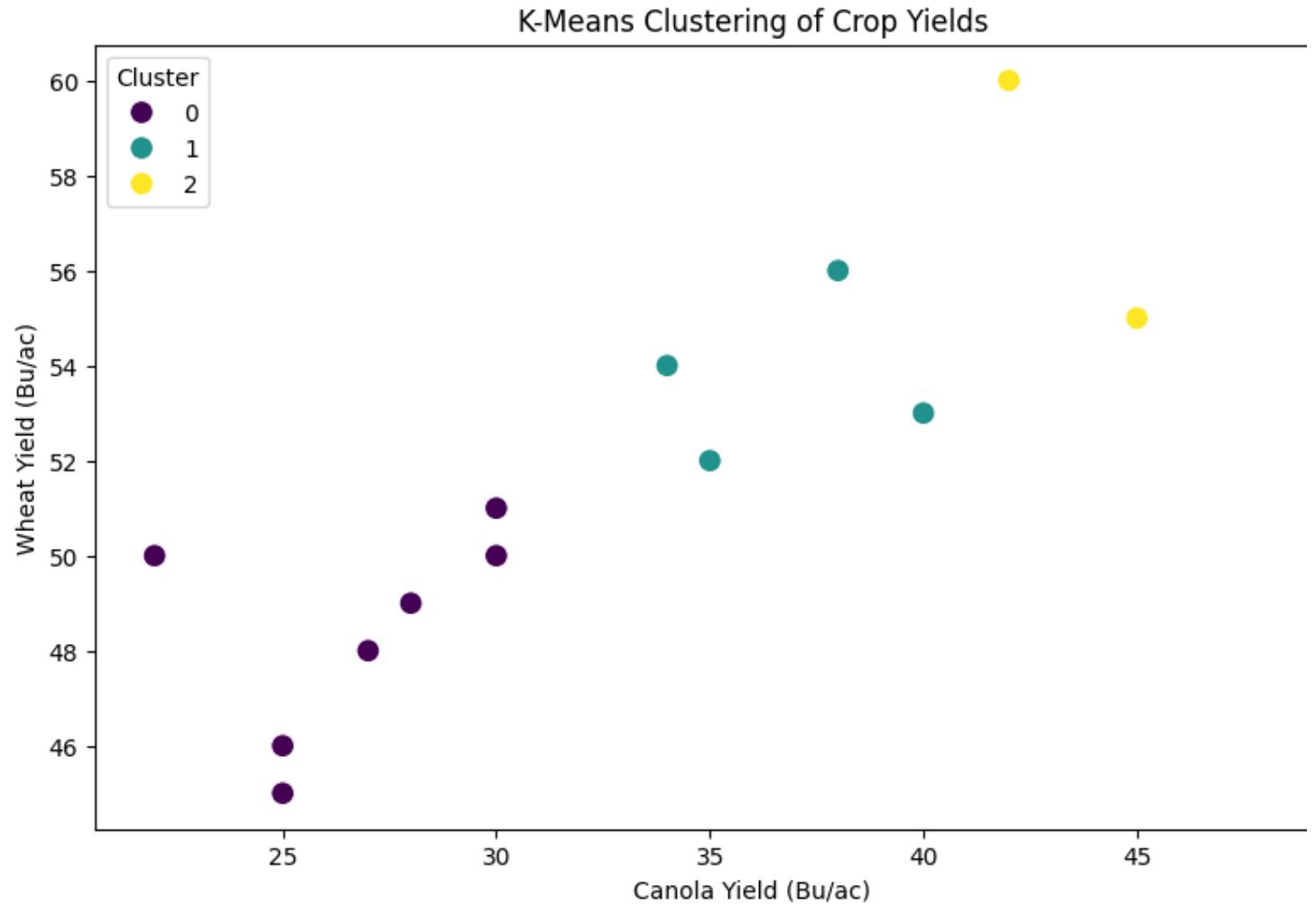




# Clustering Analysis

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- Identification of Homogeneous Regions
- Targeted Agricultural Practices
- Predicting Crop Yields
- Climate Impact Analysis
- Breeding and Research





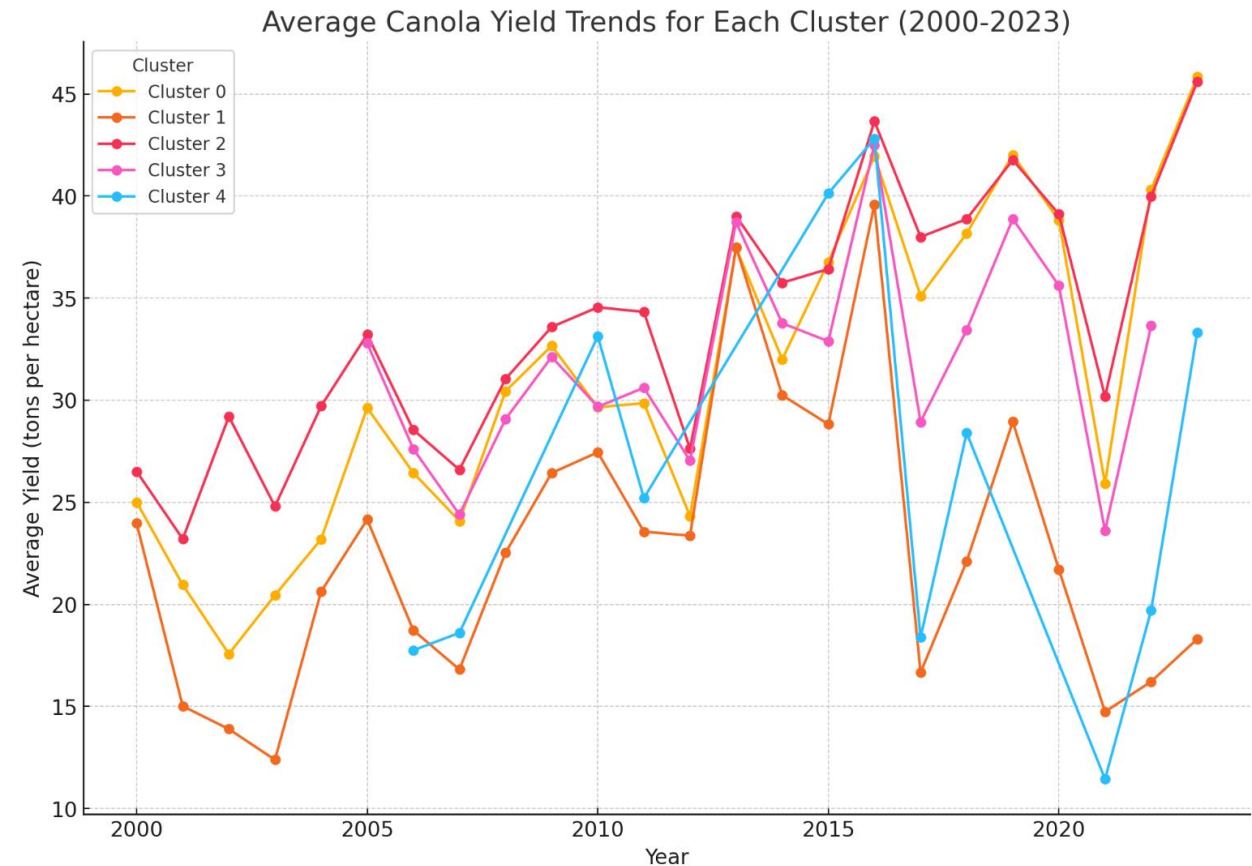
# Canola Yield Clusters

- Cluster 0: 21.06 Bu/ac
- Cluster 1: 27.43 Bu/ac
- Cluster 2: 28.37 Bu/ac
- Cluster 3: 32.22 Bu/ac
- Cluster 4: 34.18 Bu/ac

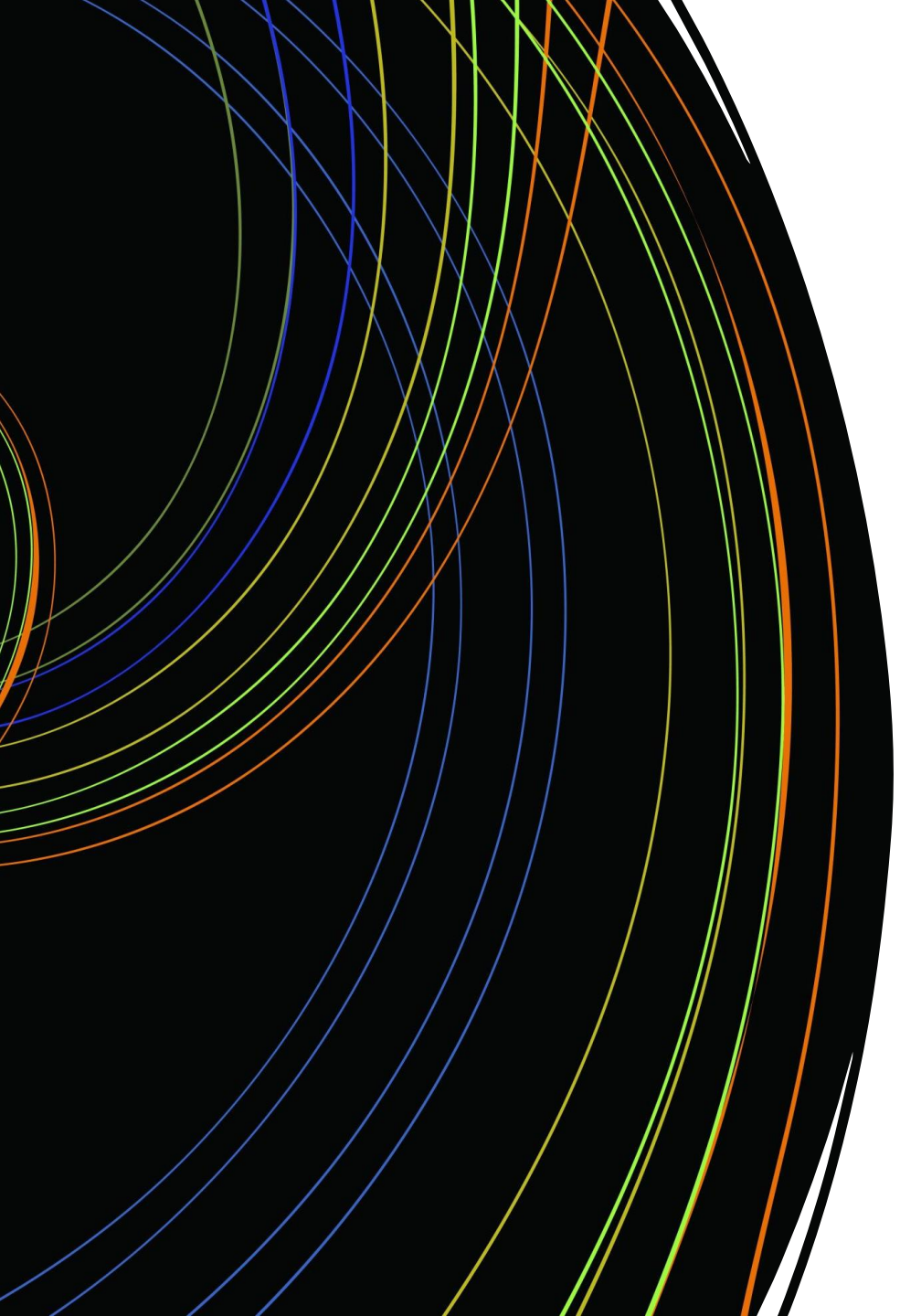
# Average Yield Trend for Each Cluster

- This chart shows the average yield trends for each identified cluster.

Average Canola Yield Trends For Each Cluster (2000-2023)







Thank You

