
Online Shop Sales Analysis

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Project Overview



- Collecting Data;
- Preprocessing Data (Cleaning, Transforming, Filtering) ;
- Feature Engineering;
- Exploratory Data Analysis;
- Customer Segmentation (Using Clustering ML Algorithm);
- Visualizing Insights



Collecting Data



Sales Data:

- Exported from Shopify Account
- Contains sales data for every order for each customer

Social Media Data:

- Facebook Posts Metrics
- Facebook Video Metrics
- Instagram Media Metrics



Customer Segmentation



Data Preparation and Feature Engineering:

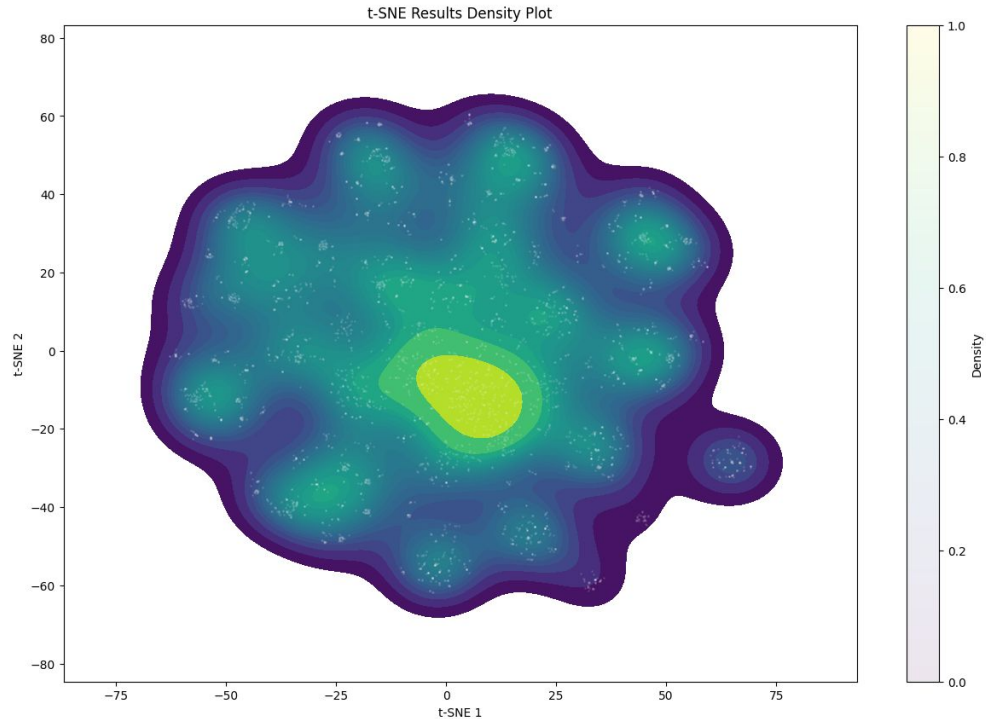
- Group stats for each customer
- Frequency, Quantity, Monetary
- Avg Stats for discounts, units per order etc.
- Product type preferences
- Referring channel distribution

Customer Segmentation

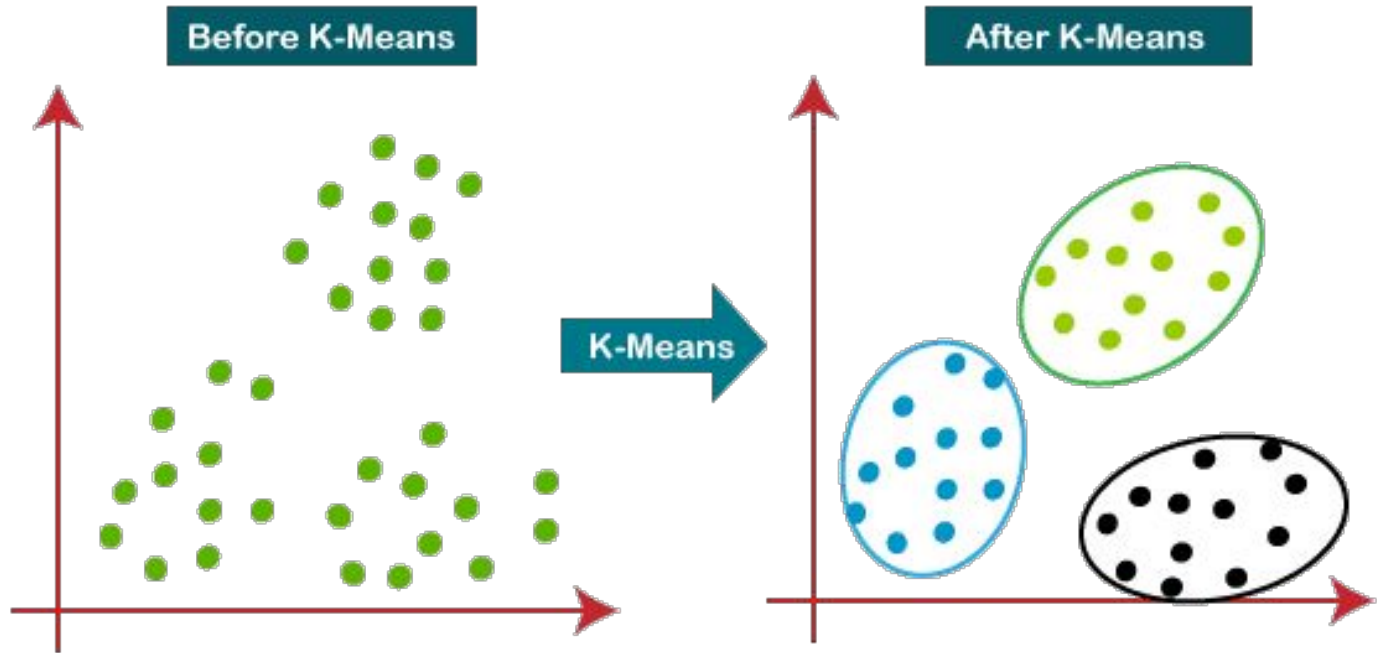


Different Approaches:

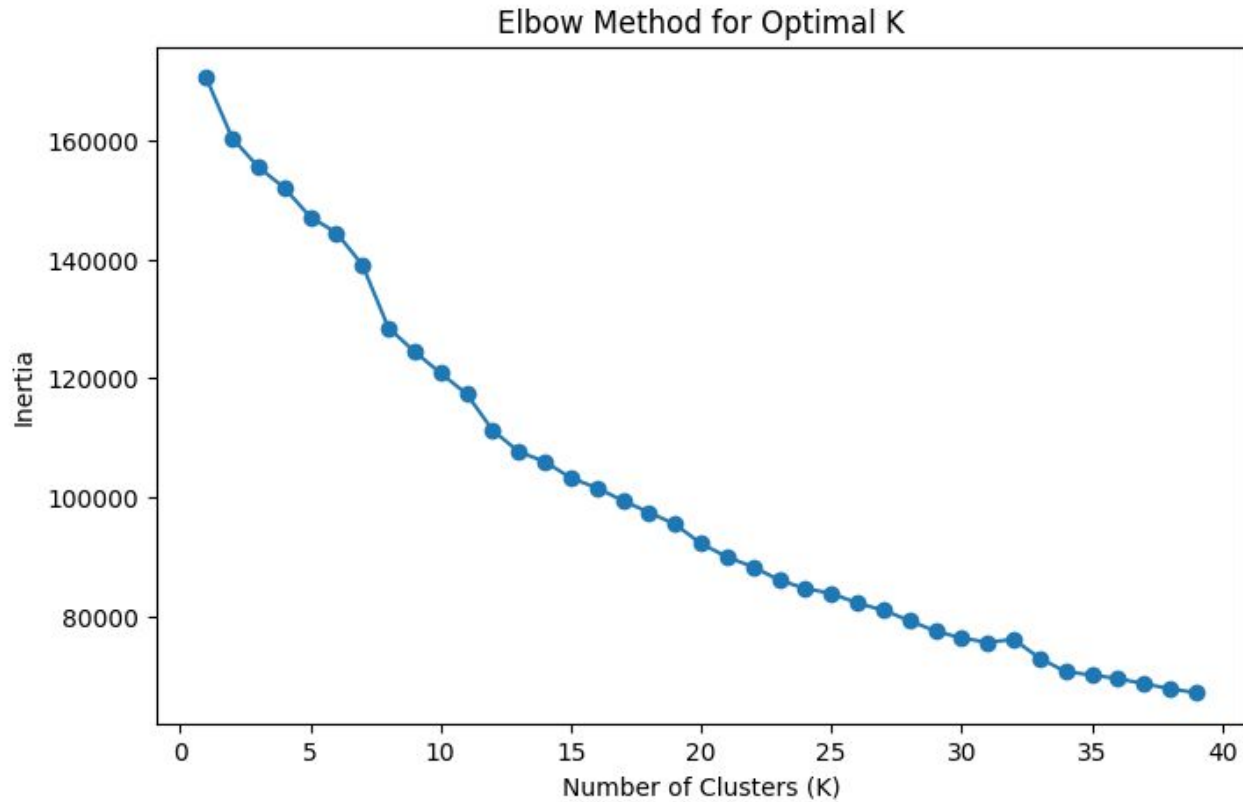
- K-Means
- PCA + K-Means
- T-SNE + K-Means
- PCA + DBSCAN



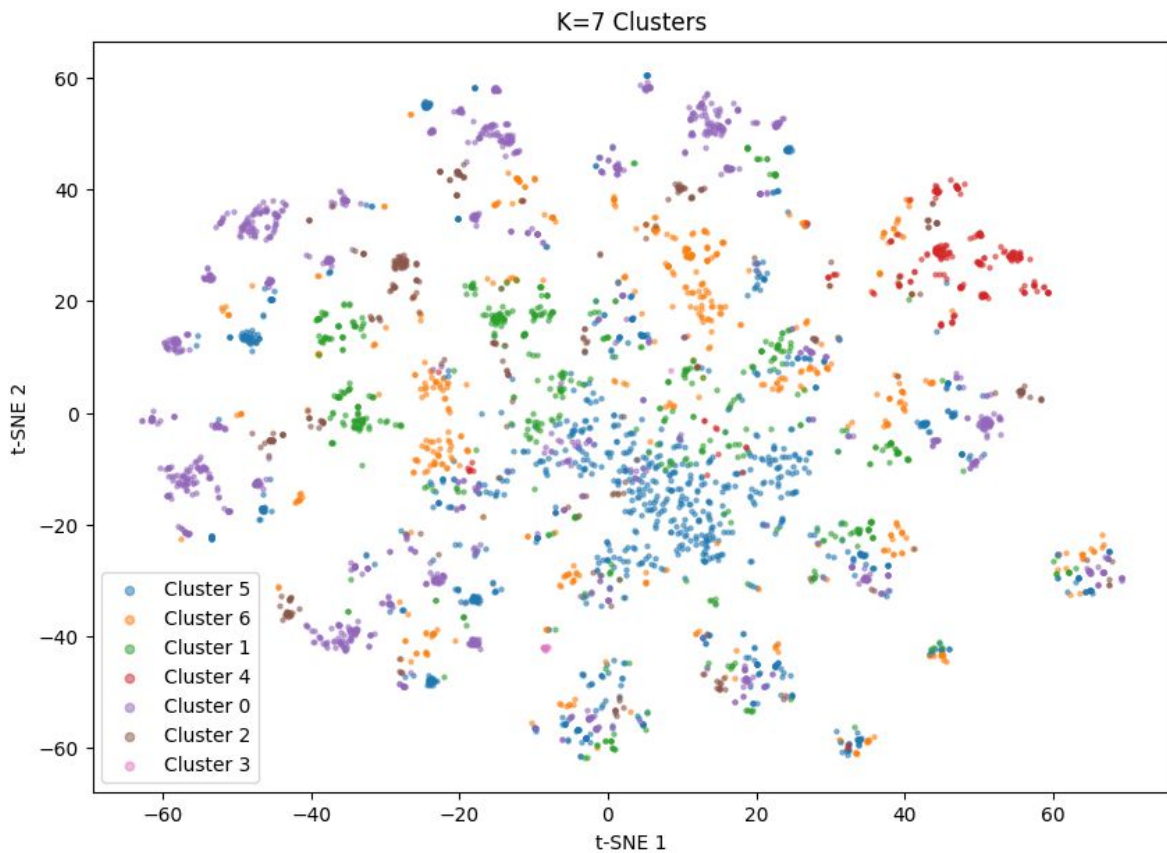
K-Means



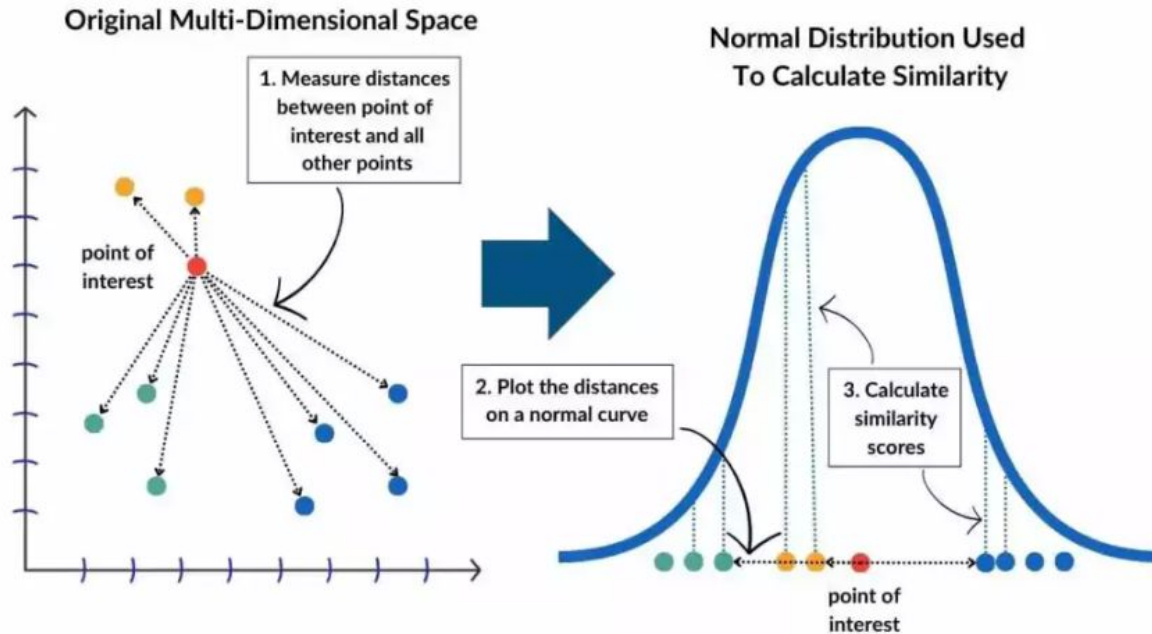
K-Means



K-Means

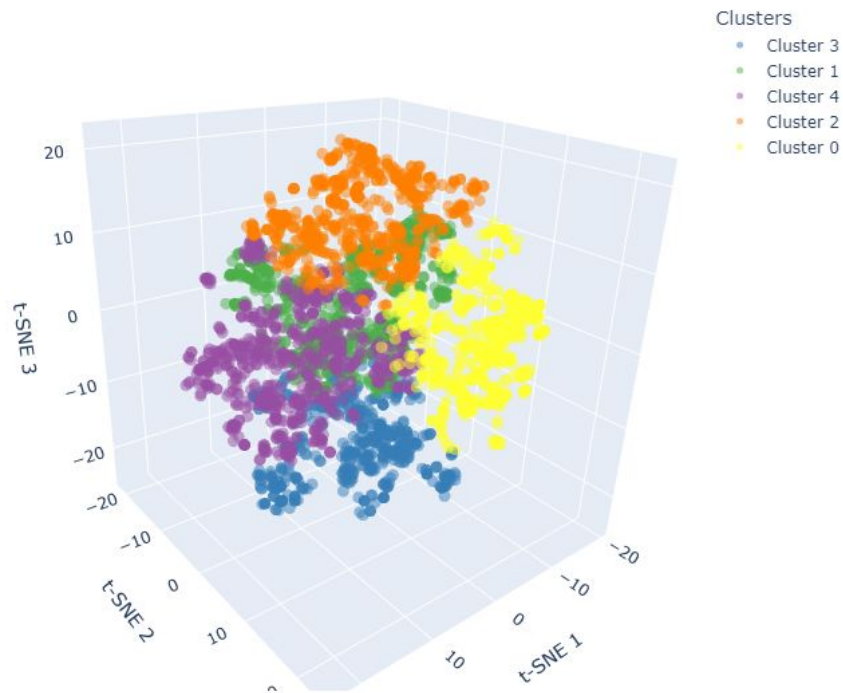


T-SNE

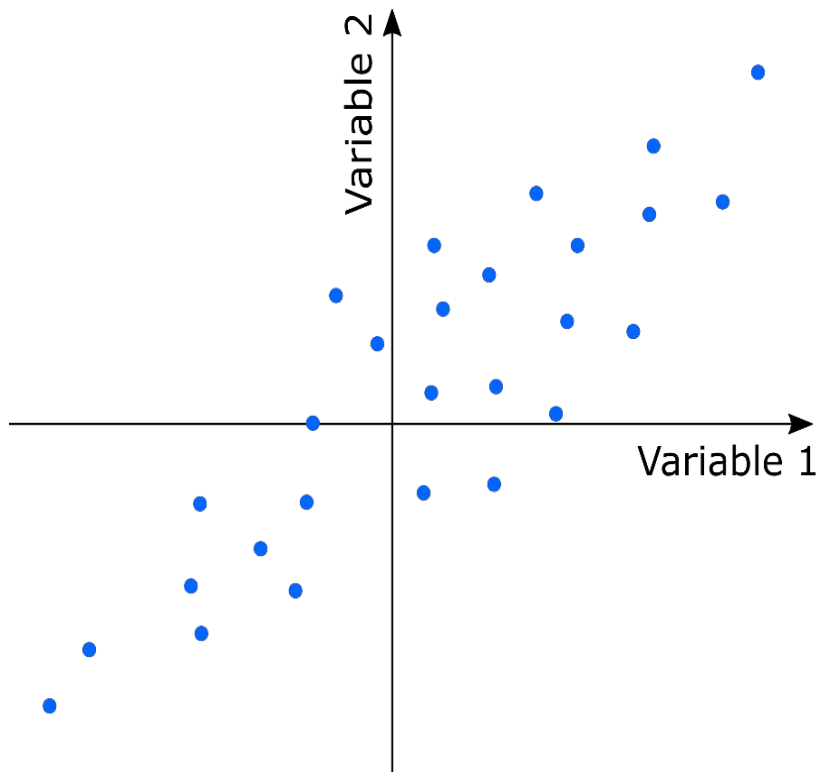


T-SNE

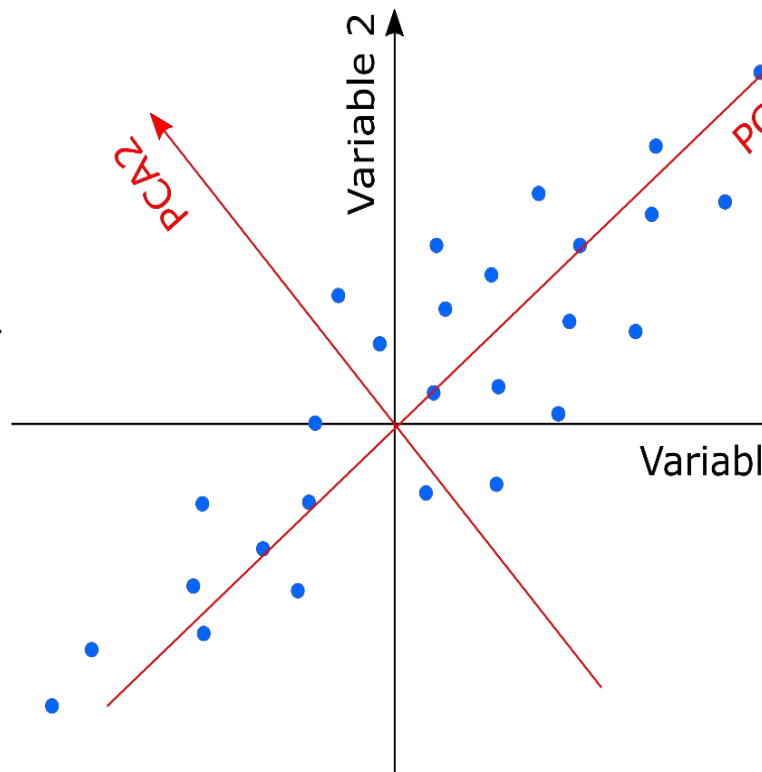
3D t-SNE Visualization



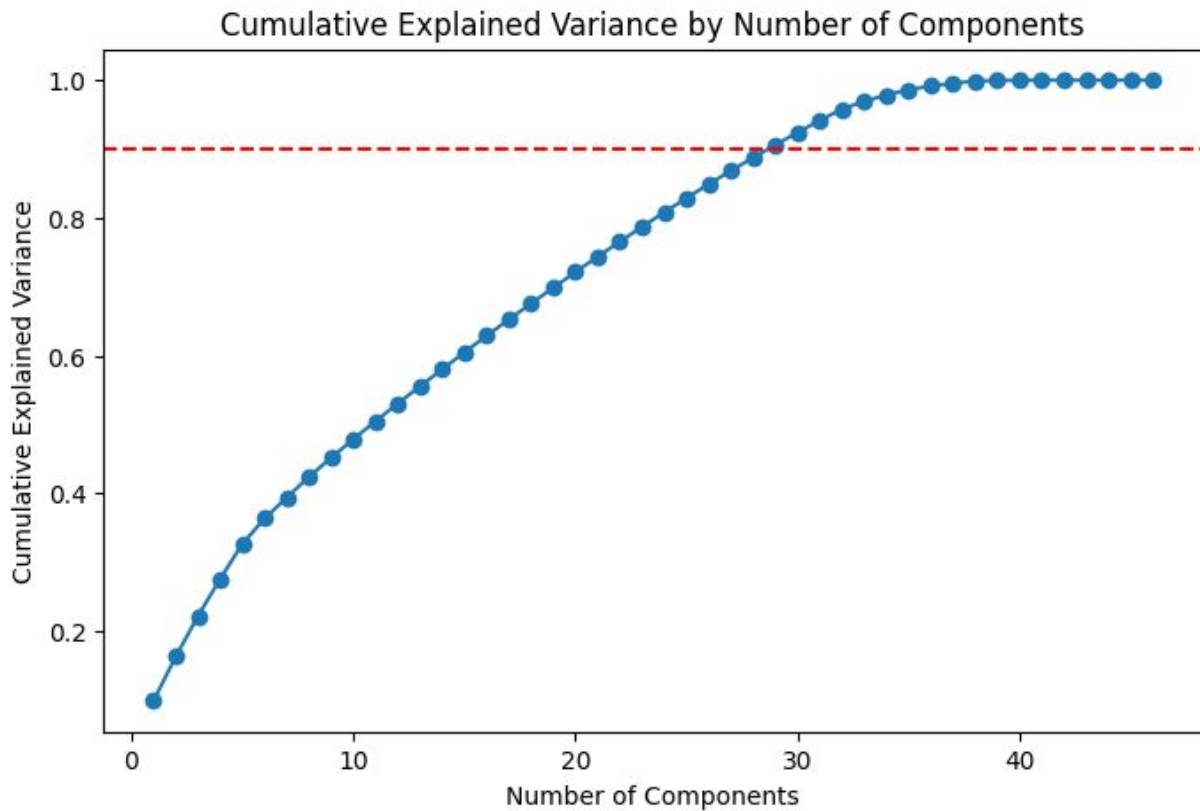
PCA



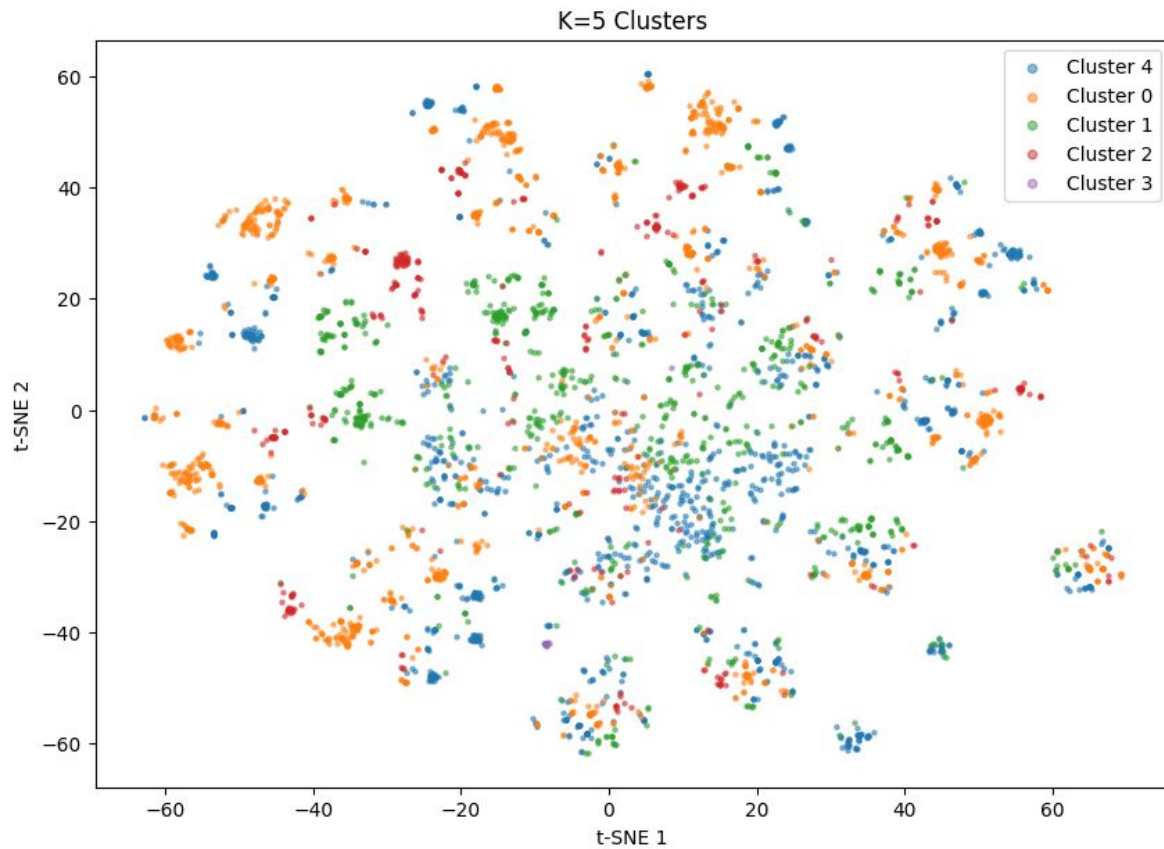
PCA
→



PCA



PCA



DBSCAN

