Visualizations Pitch Book

Guillermo Ibanez

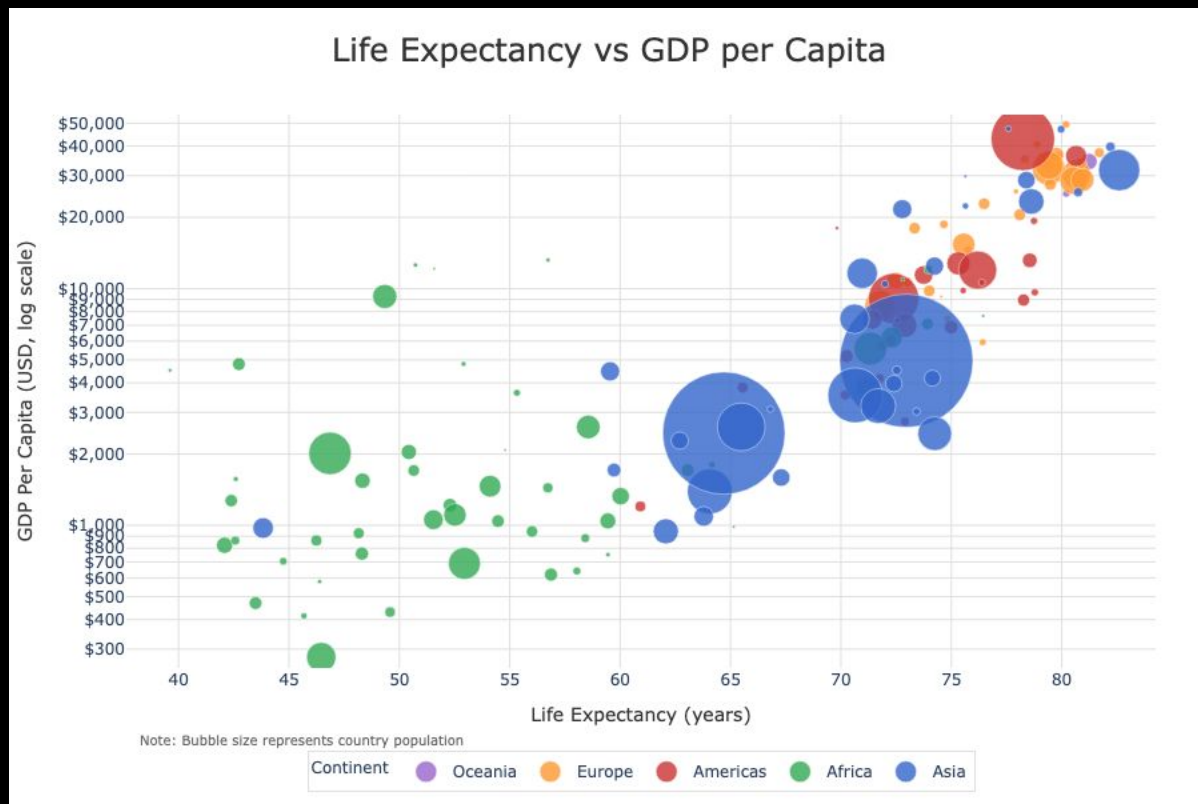# Index

Bar Chart + Multi-series time-series line chart

Economic Indicators for German-Speaking Countries

Life Expectancy in 2007
- Austria: 79.8
- Germany: 79.4
- Switzerland: 81.7

GDP Per Capita Evolution (1952-2007)

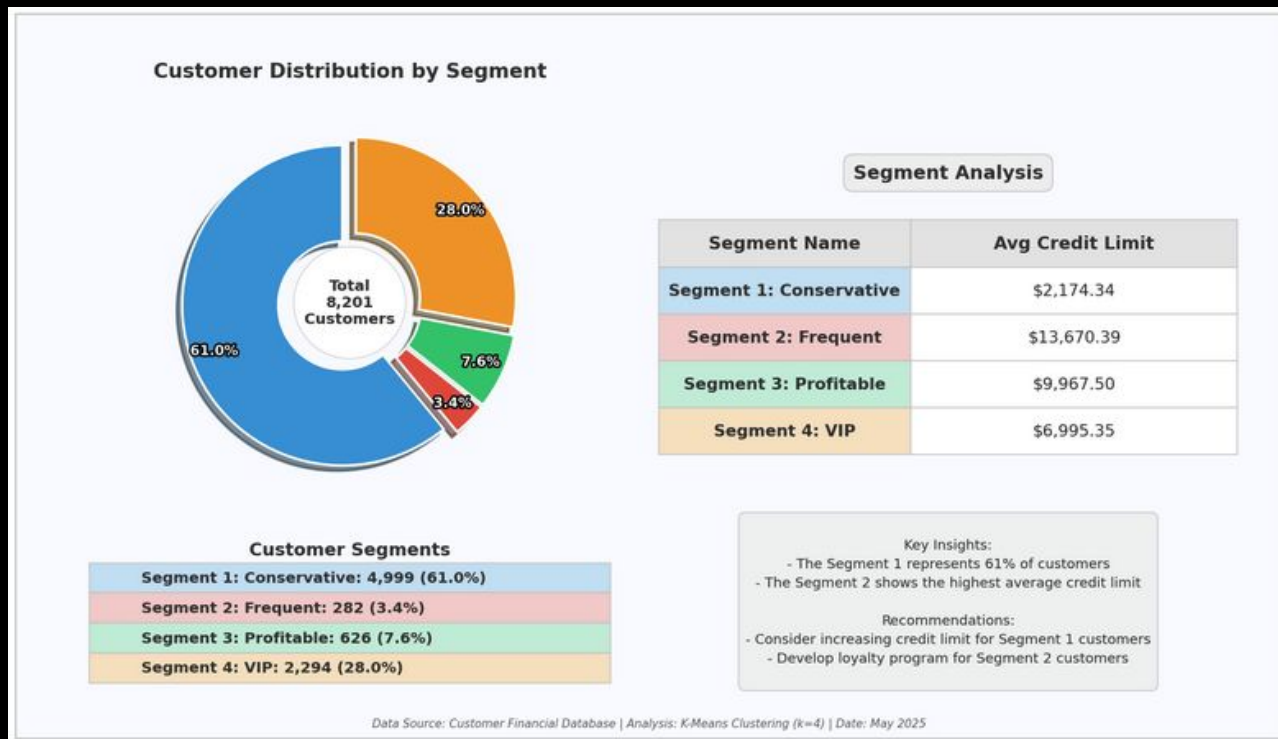Data Source: Gapminder Dataset | Analysis: Advanced Economic Comparison | Created: 2025
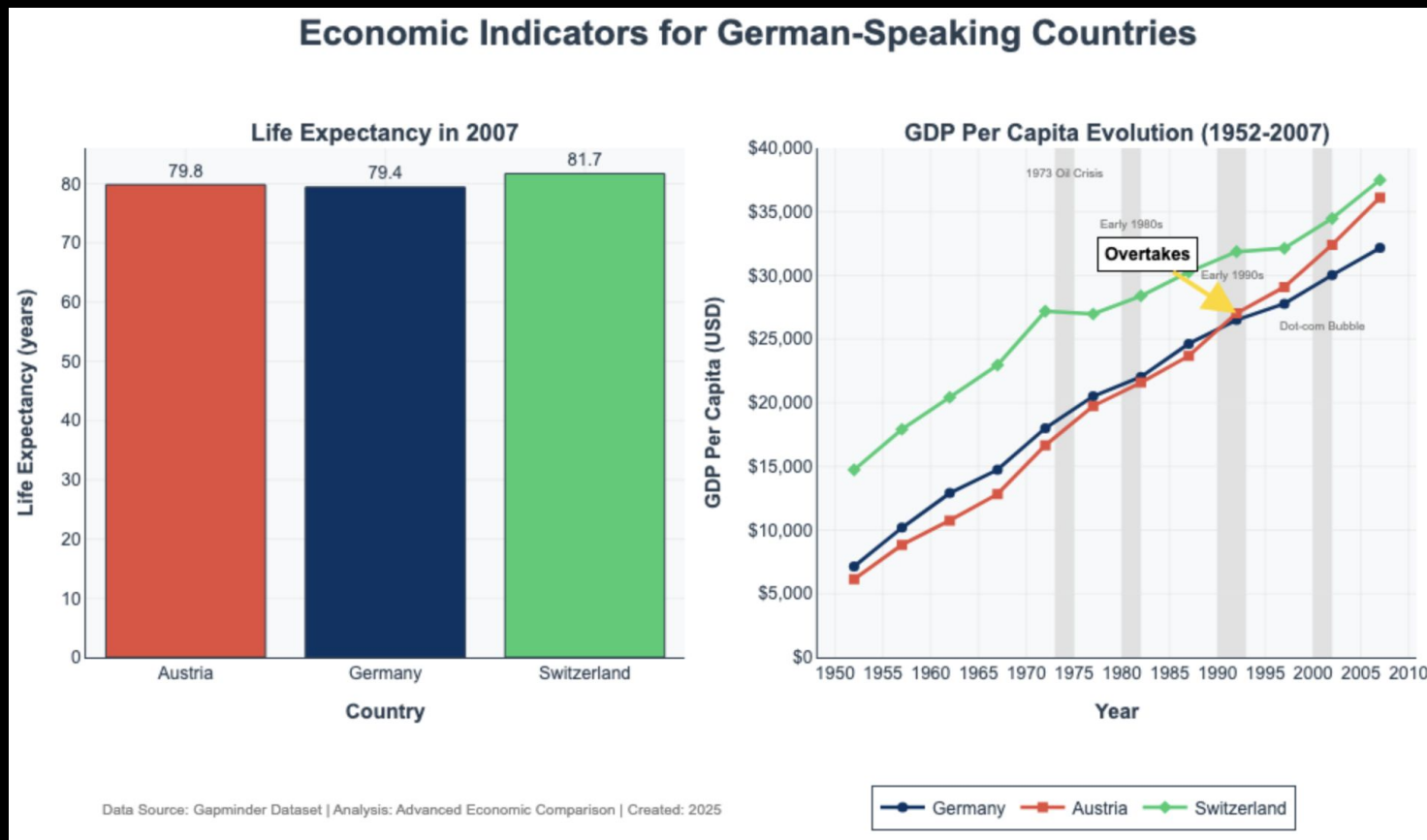
Tools:Python, Plotly, Pandas & NumPy.

Log-scaled Bubble Chart

Tools:Python, Plotly, NumPy.

Donut Chart + Data Tables + Text Annotation

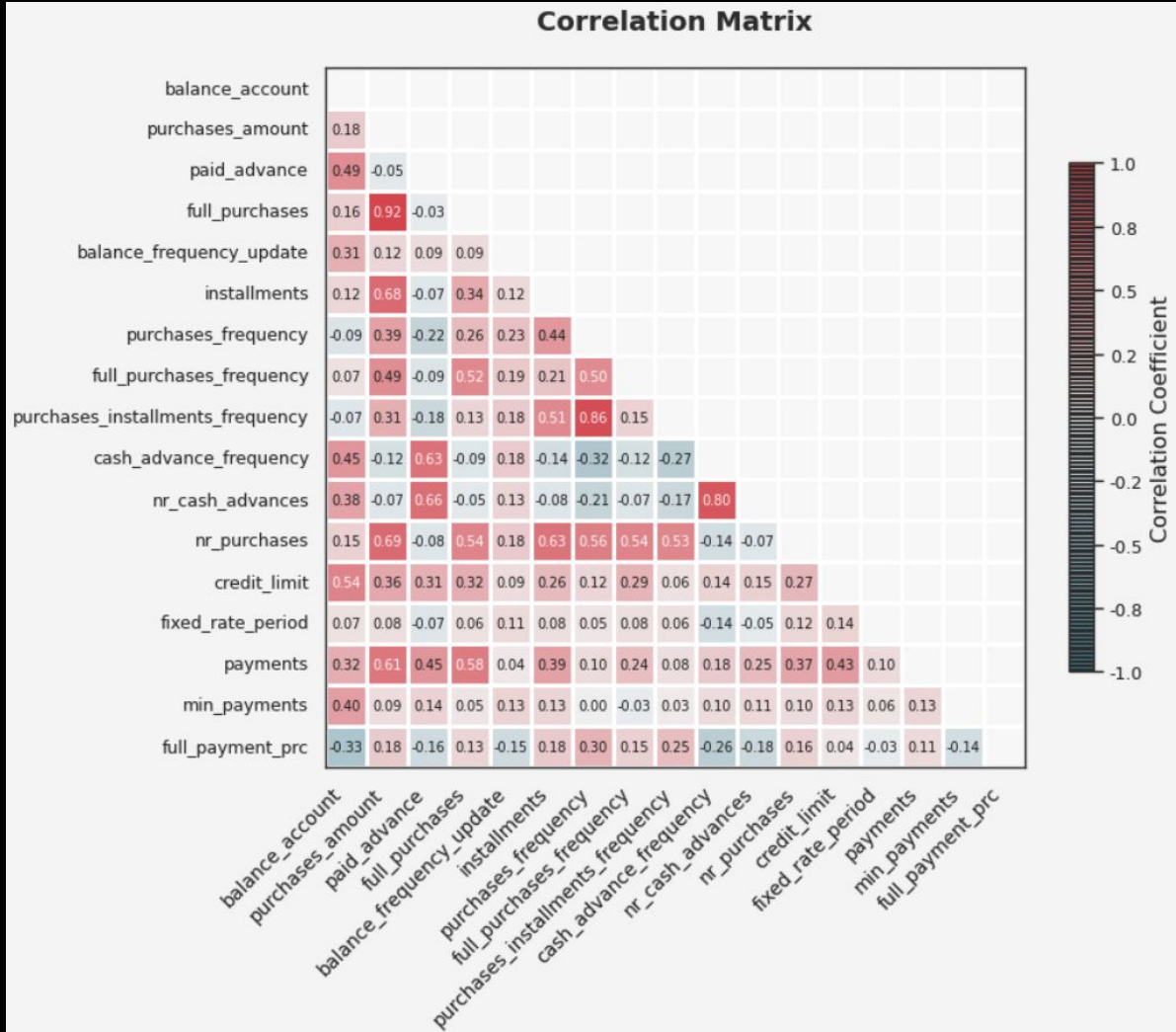Tools:Python, Matplotlib, Seaborn, Pandas & NumPy.
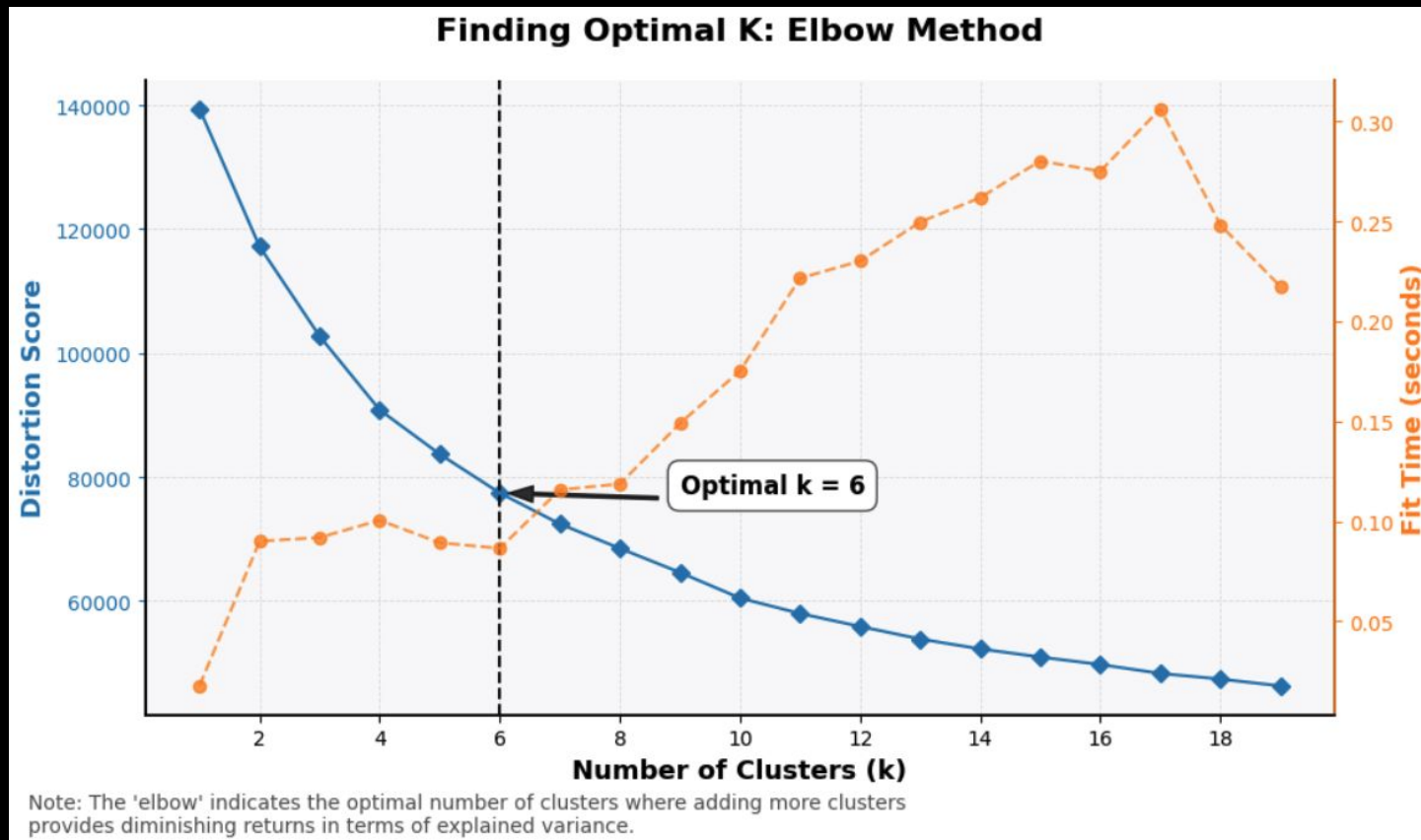
Scatterplot: Trend Analysis & Outliers Identification

Tools:Python, Matplotlib, Seaborn, NumPy, Datetime.

Correlation Matrix Heatmap

Tools:Python, Matplotlib, Seaborn, NumPy.

Correlation Matrix

Dual-axis line chart: Elbow method visualization

Finding Optimal K: Elbow Method

Optimal k = 6

Note: The 'elbow' indicates the optimal number of clusters where adding more clusters provides diminishing returns in terms of explained variance.

Tools:Python, Matplotlib, Seaborn, NumPy, Yellowbrick & Scikit-learn.

Boxplot

Credit Limit Distribution by Segment

Overall Statistics: Median: 3,000 | $Mean$: 4,513 | Total Customers: 8,201

n=4999   n=282   n=626   n=2294

$13,500

$9,500

$2,000 $6,500

Credit Limit

Segment 1   Segment 2   Segment 3   Segment 4

Segment

Note: Box depth indicates data density. Wider sections contain more observations.

Tools:Python, Matplotlib, Seaborn, Pandas & NumPy.
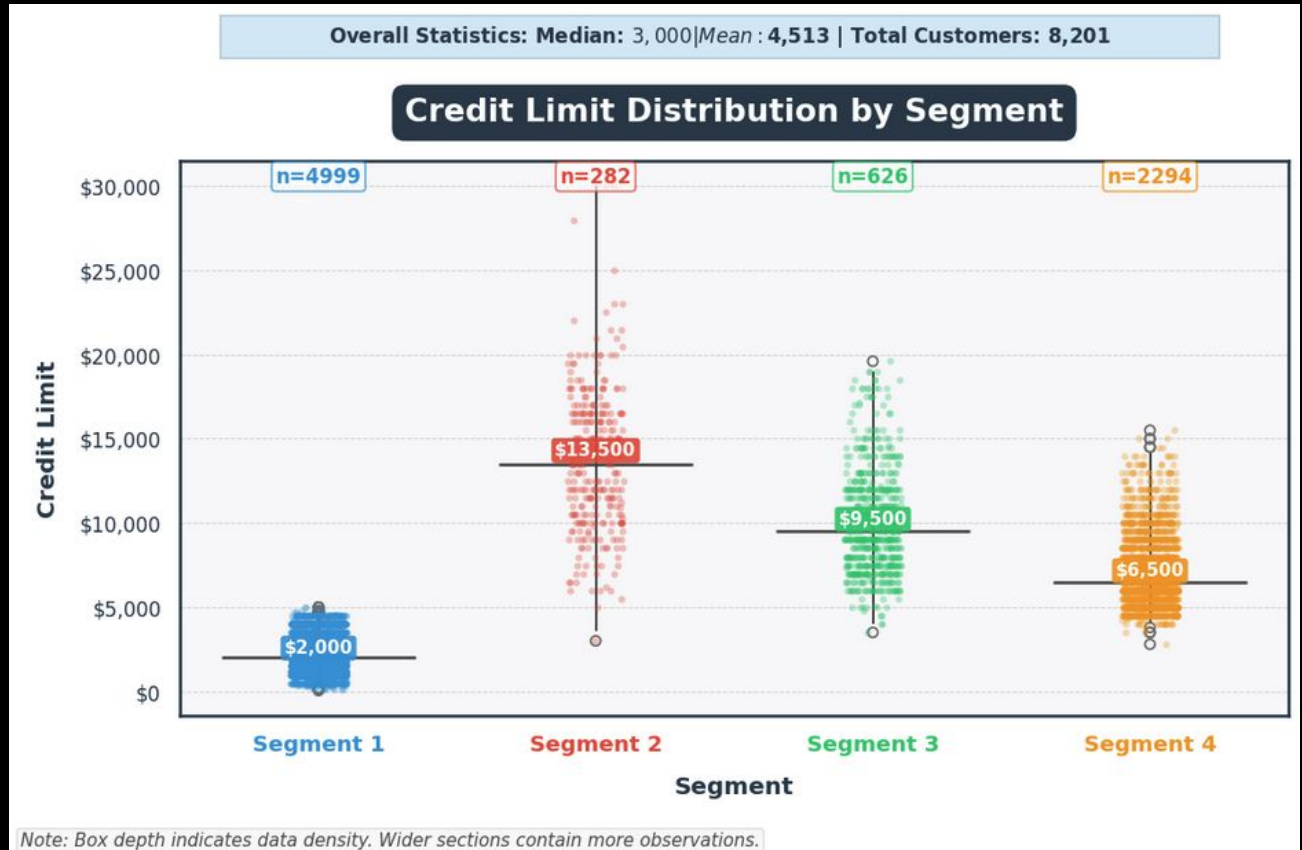
Silhouette & Scatter plot
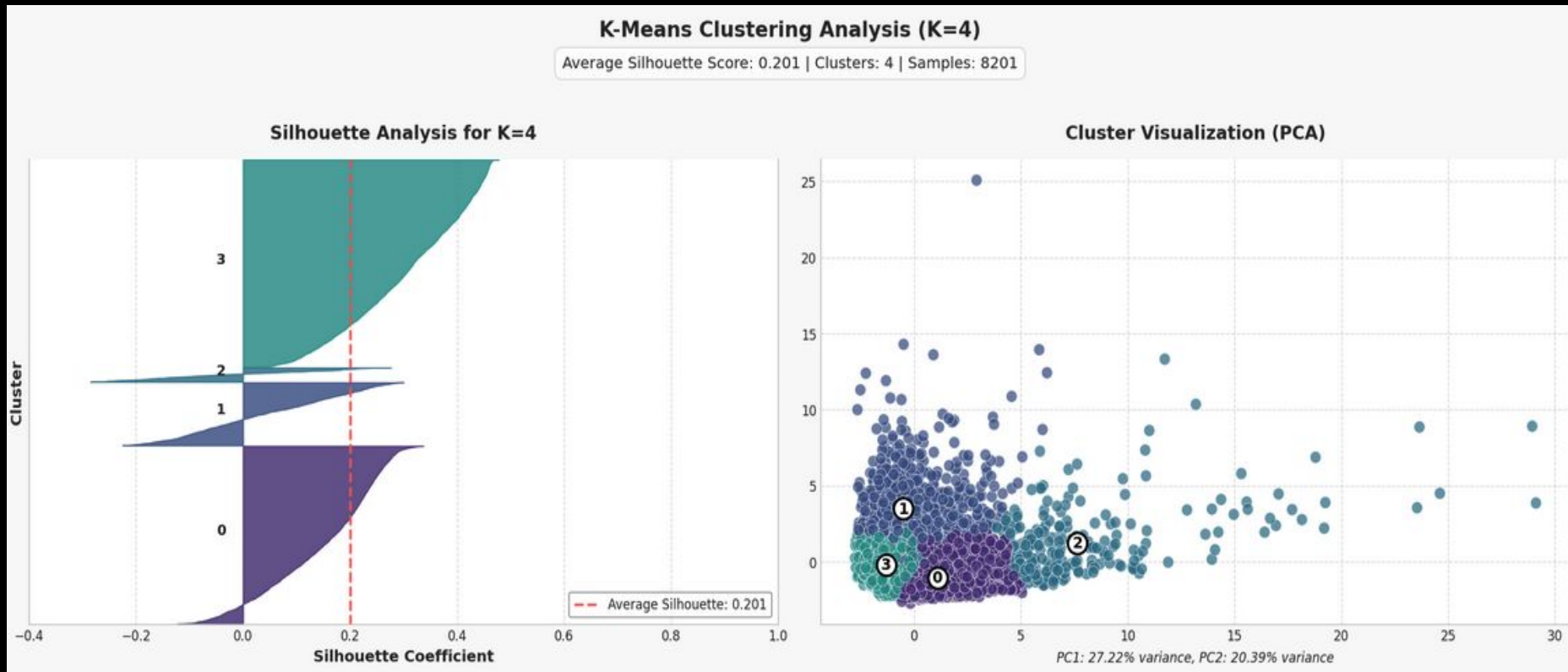
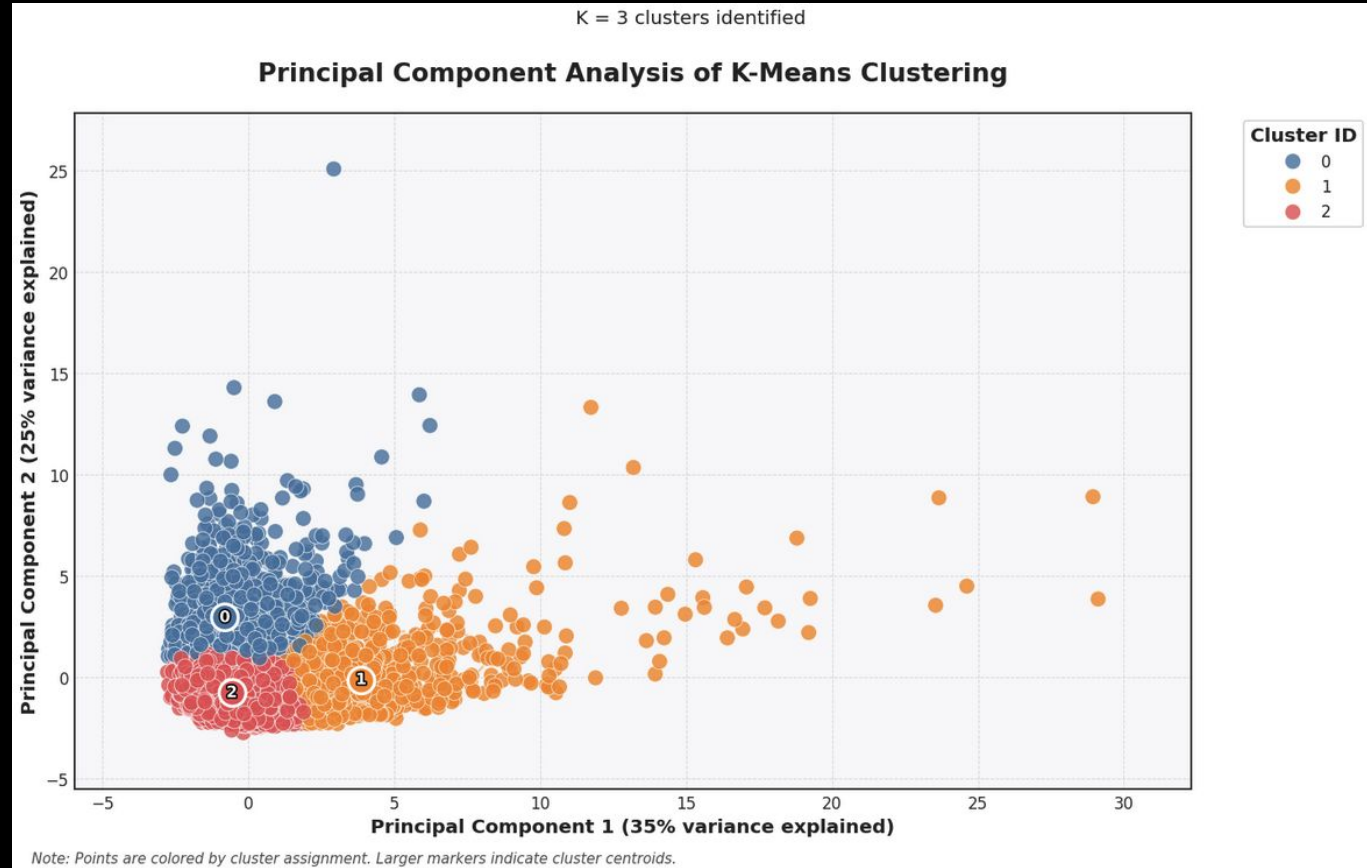Tools:Python, Matplotlib, Seaborn, NumPy & Scikit-learn.

Scatter plot: PCA cluster scatter plot

Tools:Python, Matplotlib, Seaborn & NumPy.

Scatterplot Matrix

Tools:Python, Matplotlib,
Seaborn, NumPy & Scikit-learn

Feature Relationships by Cluster