**Customer Segmentation Report**

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**Dataset Overview:**

**The dataset includes diverse customer features from an airline company.**

**Exploratory Data Analysis (EDA):**

**- Ensured data integrity, correctness, and explored column distributions.**

**- Handled anomalies in the `first\_flight\_date` column.**

**Feature Selection for Clustering:**

**Chose key features such as `AGE`, `FLIGHT\_COUNT`, `SEG\_KM\_SUM`, `avg\_discount`, and `Points\_Sum` for their relevance to customer behavior.**

**Clustering Analysis:**

**- Applied K-means clustering after determining optimal clusters using the elbow method.**

**Integrated cluster labels back into the dataset:**

**Extracted feature statistics and described distinct customer types within each cluster.**

**Recommendations:**

**Provided 1-2 actionable recommendations based on cluster insights.**

**Conclusion:**

**The analysis enables effective customer segmentation, offering actionable insights for personalized strategies and improved customer satisfaction.**