As a Data Scientist Associate at AkumenIA, I worked on an AI-driven customer segmentation project to enhance the bank's customer segmentation strategy and drive business growth. The project involved several steps, starting with data quality reporting, where we prepared a data dictionary and analyzed the bank's customer data to identify and report null values, incoherent values, outliers, invalid data, and duplicates.

Next, we created scoring variables to assess the quality of customer segmentation based on the bank's objectives and goals. We then developed over 100 Key Performance Indicators (KPIs) for use in machine learning models, cleaned and structured the data, and employed machine learning algorithms such as hierarchical clustering and K-means for customer segmentation.

By iteratively refining the models and selecting the best-performing model based on scoring variables, we were able to achieve over 96% accuracy in segment assignment without using the most important KPI, and 99.99% accuracy when including the key KPI. The project also involved sharing insights on the characteristics of each customer segment and providing detailed customer profiling to inform the bank's marketing and sales strategies.

Ultimately, our team's approach significantly improved the bank's customer segmentation strategy, empowering the bank to make more informed decisions and tailor its marketing and sales strategies to each segment, resulting in business growth. The successful development of a highly accurate assignment engine also enabled the bank to accurately determine the segment to which a client belongs, further improving the overall customer experience.