Python Project: Cross-Selling Insurance Policies

Project Description:

The insurance policy cross-selling project aimed to enhance customer engagement and increase revenue by identifying opportunities to offer additional insurance products to existing customers. Leveraging data analytics and machine learning techniques, the project sought to predict customer interest in supplementary policies, thereby optimizing marketing strategies and personalizing customer interactions.

Key Responsibilities and Tasks:

1. **Data Collection and Preparation:** I acquired and cleaned data related to customer demographics, existing policies, claims history, and other pertinent information to ensure accuracy and usability for analysis.
2. **Exploratory Data Analysis:** I conducted thorough analysis to uncover patterns and trends that indicated potential cross-selling opportunities, utilizing visualizations and statistical analysis.
3. **Feature Engineering:** I developed new features that informed predictive modeling, such as customer interactions and coverage gaps, enhancing the model's ability to predict cross-selling potential.
4. **Model Building:** I constructed and trained machine learning models to forecast which customers were most likely to be receptive to additional insurance offerings, experimenting with various algorithms.
5. **Model Evaluation and Selection:** I assessed model performance using various metrics.
6. **Implementation:** I deployed the predictive model in a real-time environment.

Outcome:

The project successfully identified key customer segments for cross-selling, leading to improved sales strategies and increased revenue.

Technologies and Tools Used:

- NumPy, Pandas and Seaborn