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**Assignment**

**Customer Lifetime Value (CLV) Prediction**

**Objective:** Predict the **lifetime value** (total expected revenue contribution) of a customer over the next 12 months, so the business can prioritize retention and upselling.

**Synthetic Data Features**

* **Customer profile**: age, income, location, segment (SME, Retail, Corporate).
* **Behavioral**: number of logins/month, avg. order size, frequency of purchases, response to promotions.
* **Financial**: tenure (months with company), total spend last year, outstanding balance, discount usage.
* **Engagement**: customer service interactions, app activity score, churn risk score (from Use Case 1).
* **Target**: CLV = numeric value (continuous variable, regression problem).

**Challenge**

* Unlike churn (classification), CLV is a **regression problem**.
* Try models like **Linear Regression, Random Forest Regressor, Gradient Boosting (XGBoost/LightGBM)**.
* They must also **segment customers by CLV tiers** (e.g., High/Medium/Low value).

**Goal**

* Build a predictive model with **R² ≥ 0.70** on synthetic test data.
* Provide a **business recommendation**: e.g., which customers to target for upselling vs. retention.