# 📄 Data Analysis Project: Scope of Work

\*\*Data Analyst:\*\* Hui-Wen (Emilia) Chou

\*\*Client/Sponsor:\*\* Simulated Marketing Analytics Team

## Purpose:

This project aims to build a predictive model to identify high-value e-commerce customers using behavioral and transactional data. The goal is to empower marketing teams to better segment and target customers with a higher customer lifetime value (CLV) for personalized retention strategies.

## Scope / Major Project Activities:

|  |  |
| --- | --- |
| Activity | Description |
| Data Import & Cleaning | Upload CSV data, validate, and clean fields |
| Feature Engineering | Generate CLV indicators: Recency, Frequency, Monetary, Tenure, EngagementScore |
| EDA & Visualization | Explore customer segments using visual analytics |
| Model Training | Train classifier (Random Forest) to predict high-CLV customers |
| Model Evaluation | Use classification report, confusion matrix, and AUC |
| Feature Importance | Identify key drivers of CLV predictions |
| Data Export | Save processed dataset for future use or reporting |

## This project does not include:

● Real-time or live data ingestion

● CRM platform deployment

● A/B campaign testing infrastructure

## Deliverables:

|  |  |
| --- | --- |
| Deliverable | Description/Details |
| Cleaned CSV Dataset | Final processed dataset with engineered features |
| Colab Notebook | End-to-end analysis and model training with visual outputs |
| Feature Insights | Visualization of what drives customer CLV |
| Exported Dataset | Processed CSV for reuse |

## Schedule Overview / Major Milestones:

|  |  |  |
| --- | --- | --- |
| Milestone | Expected Completion Date | Description/Details |
| Data Upload & Cleaning | Day 1 | Import and clean uploaded CSV |
| Feature Engineering | Day 2 | Generate RFM and engagement scores |
| EDA + Modeling | Day 3 | Visual exploration and train classifier |
| Evaluation & Export | Day 4 | Evaluate model and export dataset |

\*Estimated completion date:\* 4 working days from project start.