

## Model Development Phase Template

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|---------------|---|
| Date          | 20 June 2024  |
| Team ID       | 739986  |
| Project Title | Customer Acquisition Cost estimation using machine learning |
| Maximum Marks | 5 Marks   |

## Feature Selection Report Template

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

| Feature | Description | Selected (Yes/No) | Reasoning |
|---------|-------------|-------------------|-----------|
|---------|-------------|-------------------|-----------|

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|----------------------|---|-----|--|
| Store sales          | Sales of the store                                      | Yes | Provides insight into overall performance and revenue generation, correlated with acquisition costs. |
| Unit sales           | Sales in units  | Yes | Indicates volume of products sold, aiding in understanding demand and purchasing behaviour.          |
| Promotion name       | Name of the promotion                                   | Yes | Identifies different promotions and their effectiveness in attracting customers.                     |
| Total children       | Total number of children                                | No  | Demographic data less directly relevant to acquisition cost estimation.                              |
| Num_children_at_home | Number of children at home                              | No  | Demographic data less directly relevant to acquisition cost estimation.                              |
| Average_cars_at_home | Average cars at home                                    | No  | Socioeconomic indicator, but less directly impactful on acquisition costs.                           |
| Gross_weight         | The total weight of a product, including its packaging. | No  | Relevant for logistics but less directly tied to customer acquisition costs.                         |

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| Recyclable_packages | Packaging that can be processed and reused in recycling programs                 | No  | Appeals to environmentally conscious consumers but less impactful on acquisition cost.  |
| Low_fats            | food products that contain a reduced amount of fat compared to standard versions | No  | Targets health-conscious customers, but less directly related to acquisition costs.     |
| Units_per_case      | number of individual items or units contained within a single case               | No  | Useful for inventory management but less impactful on acquisition costs.                |
| Store_type          | The classification or category of the store                                      | Yes | Differentiates store formats which can have varying customer acquisition costs.         |
| Store_city          | The city where the store is located.   | Yes | Geographic location impacts market demographics and local competition.                  |
| Store_state         | The state where the store is located   | Yes | Adds another layer of geographic data, helping analyse regional trends and regulations. |

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| Store_sqft    | The total square footage of the store, indicating its size.                    | Yes | Larger stores may attract more customers and have different operational costs.           |
| Coffee_bar    | section within the store that serves coffee                                    | No  | Enhances customer experience but less directly related to acquisition costs.             |
| Video_store   | A retail establishment that rents or sells videos                              | No  | Less common now, providing limited relevance to current acquisition cost estimation.     |
| Salad_bar     | A section in a store or restaurant where customers can create their own salads | No  | Appeals to health-conscious customers, but less directly related to acquisition costs.   |
| Prepared_food | Food that is ready to eat or heat and serve, often found in grocery stores     | No  | Convenience factor, attracting customers but less directly related to acquisition costs. |
| florist       | A shop or business that sells flowers and floral arrangements.                 | No  | Adds variety to offerings but less impactful on acquisition costs.                       |
| Media_type    | The category of content, such as video, audio, or written formats              | No  | Useful for understanding preferences but less directly impactful on acquisition costs.   |

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| cost | The price or expense associated with a product or service. | Yes | Fundamental to calculating profitability and customer acquisition costs. |
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