**Multiple Linear Regression Analysis project proposal**

## **Overview**

In this project, we will use multiple linear regression to explore the relationship between one continuous dependent variable and two or more independent variables. To accomplish this, we will perform a complete multiple linear regression analysis, which includes exploring and cleaning data, using plots and descriptive statistics to select the independent variables, creating, and fitting a model, checking model assumptions, analyzing model performance, interpreting model outputs, and communicating results to stakeholders.

For this project, we will be analyzing a small business’ historical marketing promotion data. Each row corresponds to an independent marketing promotion where their business uses TV, social media, radio, and influencer promotions to increase sales. Based on this information, leaders in our company will make decisions about where to focus future marketing efforts.

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| **Milestones** | **Tasks** | **PACE stages** |
| **1** | **Understand the business scenario and define the problem** | **Plan** |
| **2** | **Data exploration and data cleaning** | **Plan, Analyze** |
| **3** | **Determine which variables has the strongest linear relationship with Sales** | **Analyze, Construct** |
| **4** | **Construct the model** | **Construct** |
| **5** | **Confirm model assumptions** | **Analyze, Construct** |
| **6** | **Evaluate model results** | **Analyze** |
| **7** | **Interpret results and share actionable steps with stakeholders** | **Execute** |

***The estimated times for the milestones:***