**LLM Data Analysis**

1. LLM Prompt Template developed by DigitalSreeni ()

Prompt 1

Persona: You are a data analyst working on exploratory data analysis at a newly funded startup. Context: You have been tasked with working on the penguins dataset and developing new techniques for EDA. Action: Write an R script to analyze the penguins the dataset, clean and process the data with tidyverse, perform EDA with plots. Tone: Professional. Output Format: Provide an R script.

Prompt 2

Persona: You are a GIS data analyst working on spatial mapping at a newly funded startup. Context: You have been tasked with plotting county populations in the USA. Action: Write an R script to load the required packages (usmap) and datasets (county population data from the usmaps package), as well as plot the map. Tone: Professional. Output Format: Provide an R script.

Prompt 3

Persona: You are a data scientist working on machine learning models at a newly funded startup. Context: You have been tasked with working on the penguins dataset and working on machine learning classification models. Action: Write an R script to analyze the penguins the dataset, clean and process the data with tidyverse, perform EDA with plots, and use tidymodels to design 5 different classification models including xgboost. Additionally, perform hyperparameter tuning and optimization to get the best model. Provide a table to compare the classification models. Use concepts of interpretable machine learning to evaluate the model performance. Additionally, test the code before output. Tone: Professional. Output Format: Provide an R script.