# Data Analysis Project

## Data Analyst: (You)

## Client/Sponsor:

## Purpose:

*Write a brief description of why this project is happening below. Why is this project happening? What are the goals?*

The Project is happening to leverage historical data to forecast future revenue and identify seasonal trends. The goal is that the insights derived will help improve decision making, optimize inventory and streamline sales strategies.

## Scope / Major Project Activities:

*What are the major parts of this project? List out the high-level steps, activities, or stages of the project, and give a brief description for each.*

|  |  |
| --- | --- |
| Activity | Description |
| Data Collection | * Gather historical sales data from internal systems (e.g., CRM, ERP, or spreadsheets). * Include relevant data points such as:   + Sales volumes (monthly, quarterly, yearly). * Revenue generated by products, categories, or regions. * Seasonal variations (e.g., holidays, promotions). |
| Analysis and Modeling | * **Time Series Analysis:** Identify patterns such as trends, seasonality, and cyclicity in the sales data. * **Regression Modelling:** Build statistical models to assess the impact of external factors (e.g., marketing campaigns, economic conditions) on revenue. * Perform forecasting using advanced techniques such as ARIMA, exponential smoothing, or machine learning algorithms (if applicable). |
| Forecast Generation: | * Provide sales forecasts on a: * Monthly basis (for short-term planning). * Quarterly basis (for mid-term strategy).   Highlight projected high-revenue and low-revenue periods based on historical trends. |

## This project does not include:

*Specify the things that this project isn’t responsible for doing (out of scope). For instance, “this project does not involve a summation of 2019 data analysis”*

* **Real-Time Data Integration:** The project does not involve integrating real-time sales data or live updating dashboards.
* **Customer Segmentation Analysis:** It does not include detailed analysis of customer demographics or behavioral segmentation.
* **2019 Data Analysis:** This project will not analyze sales data prior to the year 2020 (if applicable).

## Deliverables:

*A specific list of things that your project will deliver.*

|  |  |
| --- | --- |
| Deliverable | Description/ Details |
| Cleaned Data | Cleaned and processed historical sales dataset. |
| Statistical Analysis | Statistical analysis report identifying trends and seasonal patterns. |
| Forecast Models | Forecast models (e.g., ARIMA, regression models). |
| Visualizations | Interactive dashboards and visualizations for revenue insights. |
| Reports | Comprehensive final report including actionable recommendations. |

## Schedule Overview / Major Milestones:

*The expected schedule for the project. This can be defined by milestones (e.g. “all data is cleaned and processed”), periods of time (“Week 1 / Week 2”), or other ways based on the needs of the project.*

|  |  |  |
| --- | --- | --- |
| Milestone | Expected Completion Date | Description/Details |
| Project Kickoff | Week 1 | Finalize project scope, objectives, and deliverables. Collect necessary access to historical sales data. |
| Data Collection | Week 2 | Gather and consolidate all relevant sales data from internal systems. Validate the completeness of the data. |
| Data Cleaning and Processing | Week 3 | Remove inconsistencies, handle missing values, and prepare data for analysis. Create a structured dataset. |
| Time Series Analysis | Week 4 | Perform trend analysis and seasonal decomposition on the sales data. |
| Forecast Model Development | Week 5 | Build and validate regression and time series models for forecasting future sales. |
| Data Visualization Development | Week 6 | Design and create dashboards or charts that clearly communicate sales forecasts and trends. |
| Stakeholder Review | Week 7 | Present findings, forecasts, and visualizations to stakeholders for feedback and approval. |
| Final Report Delivery | Week 8 | Submit the complete analysis report, including insights, recommendations, and visualizations. |
| Project Kickoff | Week 1 | Finalize project scope, objectives, and deliverables. Collect necessary access to historical sales data. |

## \*Estimated date for completion:

*This is my “if all goes well and I have everything I need, this is when I’ll be done” date.*

***18 February***