Project Charter

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| Project Name: Forecasting store sales on data from Corporación Favorita, a large Ecuadorian-based grocery retailer. | |
| **Date Created**: 24-01-2023 | **Date Approved**: 31-01-2023 |
| Problem Statement: The purpose of this project is to anticipate retail sales based on provided data using time series forecasting. | |
| Goals:   Accurately Predict sales for the large grocery store Corporación Favorita  Ecuadorian-based grocery retailer.  Requirements:   * Data: The availability of historical sales data is essential for training a sales forecasting model. The data should be comprehensive, accurate, and relevant to the business. * Algorithms: There are various algorithms for sales forecasting using ML, and selecting the appropriate algorithm is critical for the success of the project. * Features: Identifying the right features that impact sales is important. Features are the variables that the model uses to predict sales. It could be product price, promotion, seasonality, and competitor activities. * Accuracy Metrics: Selecting the right metrics to evaluate the accuracy of the model is essential. Some of the popular metrics used in sales forecasting include Mean Absolute Error (MAE), Mean Squared Error (MSE), Root Mean Squared Error (RMSE), and coefficient of determination (R²). * Scalability: The model should be scalable and able to handle large volumes of data. * Continuous learning: The model should be designed to continuously learn and adapt to changing business conditions. This allows the model to adjust its predictions based on new data, changes in the market, or changes in consumer behavior. * Integration: The model should be integrated with the business systems such as enterprise resource planning (ERP) software, customer relationship management (CRM) tools, and point of sale (POS) systems. * Interpretability: The model should be interpretable so that the business can understand how it arrives at its predictions.   Project Scope:  The scope of the project includes the following:  • Analyze historical sales data to identify patterns and trends in customer buying behavior  • Develop a machine learning model to forecast future sales for different product categories and time periods  • Evaluate the accuracy of the model and identify opportunities for improvement  • Provide a sales forecasting report with insights and recommendations for the grocery store | |
| Budget:   |  |  | | --- | --- | | **Category** | **Budget** | | **Project Team members** Project Manager, ML Engineer, Data Scientist, Quality Assurance Department | $60,000 | | Software requirements | $3,500 | | Infrastructure | $10,000 | | Training and Support | $5,700 | | |
| Deliverables:   * Data cleaning and preprocessing scripts * Exploratory data analysis report * Machine learning model code and documentation. * Sales forecasting report with insights and recommendations for the grocery store * Presentation of findings and recommendations to stakeholders * Project Risks: The following risks have been identified for the project: * Data quality issues may impact the accuracy of the model. * Unforeseen technical challenges may arise during the model development phase. * Stakeholders buy-in may be difficult to obtain | |
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