# THE MACHINE LEARNING CANVAS

Designed for: | Designed by: | Date: | Iteration: .

## PREDICTION TASK

The project uses one of the best forecasting algorithms, namely ARIMA.

## DECISIONS

Time Series Forecasting is critical in areas such as finance, manufacturing, health, weather studies, and social sciences. These fields could rely on the predictions of future needs, such as sales numbers. The predictions could assist in fine-tuning their stock and boost the efficiency of their supply chain. Hence, precise forecasting is necessary for businesses to adapt to market shifts and stay ahead of competitors.

## VALUE PROPOSITION

**Easy to use**, by just entering the data, the forecasting results will come out immediately.

**Cost reduction,** forecasting also helps companies reduce costs by providing companies the foresight not to order more stock than necessary to fulfill customer orders.

**Inventory management and reduction**, If a manufacturer can better understand and predict demand or orders for certain products, they can more effectively work with suppliers to achieve optimal inventory levels and reduce the likelihood of part overages or shortages.

## DATA COLLECTION

No data is needed for training because the model works according to the best method for selecting ARIMA parameters. For the testing dataset, use the dataset from Kaggle.

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## IMPACT SIMULATION

Projects can be deployed on your server. Testing results with 3 datasets from Kaggle. The results are entirely satisfactory, but there are still several things that need to be improved.

## MAKING PREDICTIONS

Because the model is on the web, to make predictions. The user only needs to input data according to specifications within seconds. The results will come out.

## BUILDING MODELS

This model does not yet include seasonal ARIMA (SARIMA). In the future, we can incorporate this model to improve project quality.

## FEATURES

Data is converted monthly or weekly.

## MONITORING

For the next step, the project can monitor forecasting results. We can use evidentlyAI for tool monitoring. The monitoring includes data drift, target drift, etc.



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