Operating Expenses Forecasting

A Mphasis machine learning solution

Why Operating Expenses Forecasting?

- Operating Expenses Forecasting can be used to forecast the expenses an organization may incur as a result of its normal operating activities.

- Operating expenses are usually the largest category of expenses a company incurs. Its predictability and control are important aspects which determine whether the company will be profitable or not.

- This forecasting solution can be used by companies in a wide variety of industries like manufacturing, retail, services, hospitality, pharmaceuticals, etc.

30
Weeks of forecasting based on historical data

Product overview

Operating Expenses Forecasting generates 30 weeks of forward forecast of the operating expenses using historical data. This will help businesses predict and manage their operating expenses more effectively through better working capital management and improved planning for resource allocation.

The solution uses ensemble machine learning (ML) algorithms with automatic model selection algorithms. This solution provides consistent and better results due to its ensemble learning approach and performs automated model selection to apply the right model based on the input data.

Product features

Predictive forecasting

This solution will take in weekly data as input and provide 30 weeks of future forecasting. Automatic model selection will automatically identify the set of optimal algorithms and combine their results using ensemble learning.

Time series-based

Mphasis Time Series Forecasting can be applied in operating expense prediction.

Intelligent forecasting

Mphasis leverages the latest deep learning and machine learning technologies to provide optimal forecasting solutions.

How it works

The forecasts are generated by an ensemble of state-of-the-art machine learning models and leverages automated model selection to identify the set of optimal algorithms. It then combines the results with the most consistent ones.

The underlying model takes the input from an Amazon Simple Storage Service (S3) bucket and performs preprocessing. It then passes the data to the forecasting model to predict the future values. This is then routed into the output S3 bucket and made available for the user.

Input – Any comma-separated values (CSV) file with time series data conforming with the usage instructions can be provided input to the solution. For a reasonably accurate forecast at least 50 to 100 data-points need to be provided. The higher the variability the more data will be required.

Output – The solution generates future forecasts of the next 30 periods and appends them to the input time series data. The forecasted time periods are tagged with the keyword "forecast."
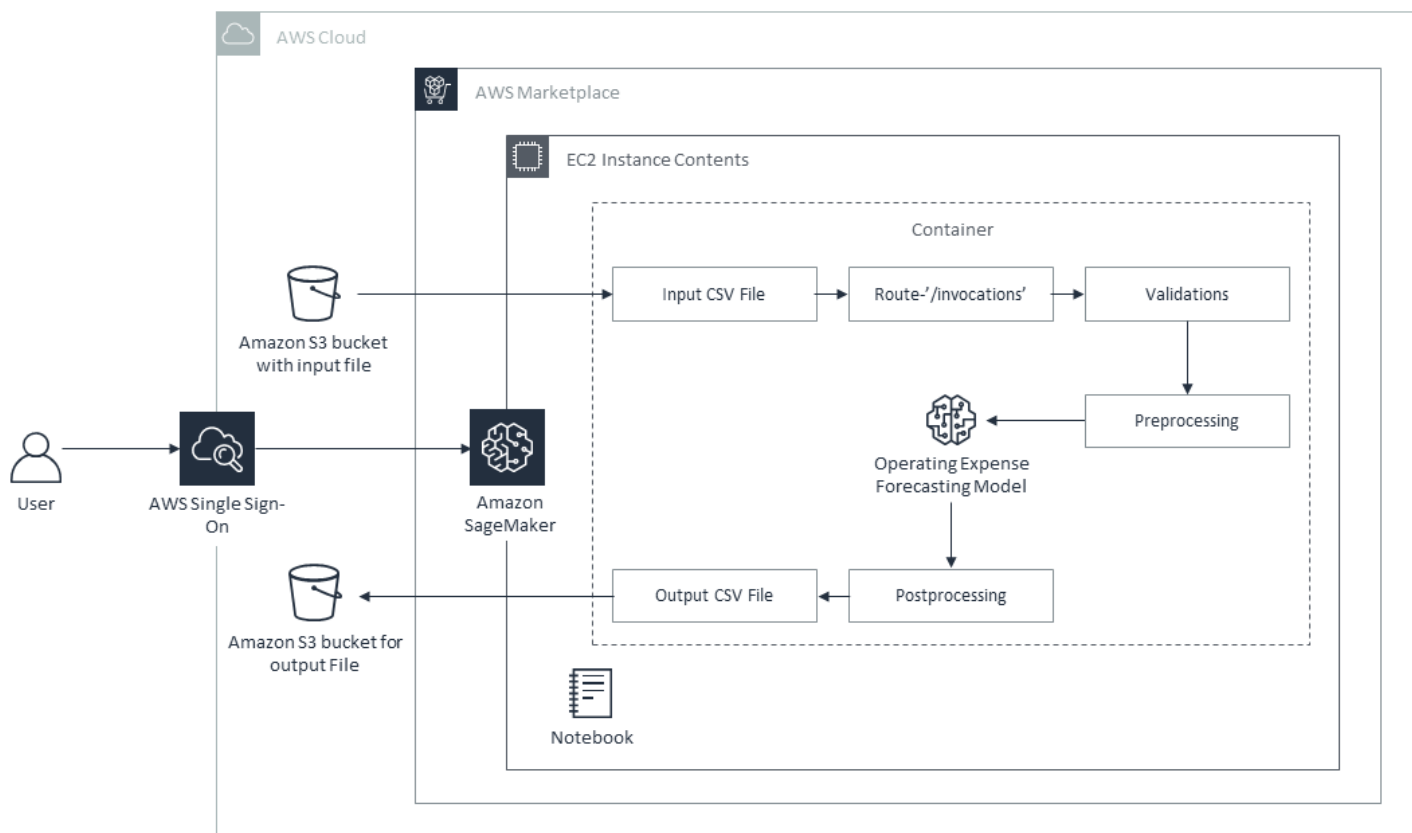
Differentiators

- Employs an ensemble of machine learning models.
- Leverages automatic model selection to identify and use the best performing models.
- Performs more consistently and accurately than standalone or univariate models.

Product Specifications

	Input	Output
Supported content types	text/csv	text/csv
Unique Identifier	'maskedsku'	'maskedsku'
Date Format	'YYYY-MM-DD'	'YYYY-MM-DD'
Expense Data Type	Float	Float

Additional Resources

- Mphasis DeepInsights
- Sample Jupyter Notebook
- Sample Input File

Solution available in AWS Marketplace