

Forecasting

Trend analysis and forecasting is the use of historic data to determine the direction of future trends. The resulting insight can be used to inform financial budgets, anticipate expenses and track user growth for a projected period of time.

A simple analogy to understand forecasting is that in order to predict the future, we must understand the past and use it to scientifically predict the direction of a particular trend.

Forecasting: Q & A

- What will my conversions or revenue be next month? Quarter? Month?

Forecasting methodologies can take any numeric distribution over a time period and predict the trend of that line going into the future for a pre-defined amount of time. The methods are attentive to differences in weekdays, seasons and larger trends in order to produce a reliable projection of your most important key performance indicators.

- What can I learn from any of my business from forecasting?

Forecasting can inform budgets given sales outputs, user trends on your website, or even predict sales results given marketing spend. Forecasting can also help your business gain a deeper understanding of supply and demand trends, and inform executives on revenue goals and sales target dates.

Forecasting: Applications & Benefits

Forecasting allows businesses to determine the direction of future trends. Operationally, forecasting is incredibly durable insofar as the analysis applies to nearly every portion of your business, therefore the benefits themselves are also far reaching. Businesses realize the benefits of forecasting in cost saving, increased revenue, and enhanced consumer/business understanding. Below are 10 practical benefits to the using forecasting in your business:

Learn From History. Utilizing data from the past can be used to help predict the future, strengthening understanding and in turn, your business.

Anticipate The Future. Though forecasting isn't perfectly clairvoyant, it does provide a verifiable sense of direction, granting your business a foundation for which to understand future results.

Customer Satisfaction. Forecasting can be used to predict ecommerce supply and demand in order to ensure that your business properly anticipates market trends.

Cost Savings. Prediction of demand and spend with forecasting allows your business to determine the optimal staffing and investment decisions.

Industry Leader. Utilization of forecasting techniques allows your business to have a sense of market trends before they happen, enabling you to pivot and accommodate market forces before they happen.

Foresee Threats. Forecasting can reveal drops in conversions or revenue, enabling your teams to recognize and mitigate the threats to your business before they happen.

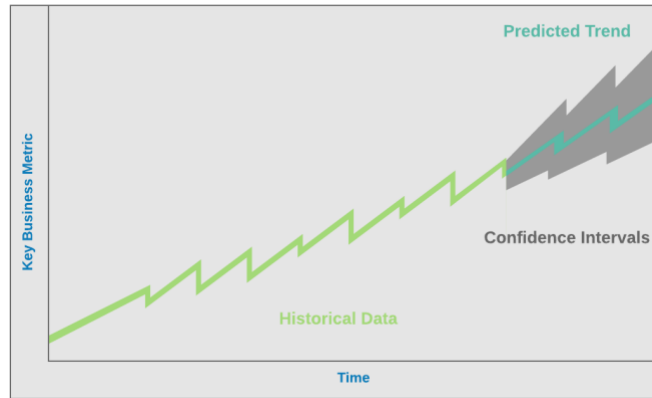
Inventory Management. Determine the necessary inventory for a conversions period via forecasting methodologies, in order to reduce unneeded cost and risk.

Implementation of forecasting methodologies across all your business units and on a regular basis forces your company to perpetually consider their future. The result is the recognition of market trends before they happen and quantification of the past to understand the future, all with the purpose of driving revenue and cutting costs.

Forecasting: *Technical Overview*

Predicting future results is the overarching goal of forecasting, however, the kinds of business questions and model considerations vary widely. There are two primary conceptual frameworks utilized in forecasting: time series and causal modeling.

Time Series Forecasting focus solely on the patterns of historical data distributions. The data is traditionally a sequence of equally spaced metrics in time with consideration of a single metric, such as sales. Results traditionally include a predicted trend line with intervals of confidence above and below the predicted trend to control for statistical error.

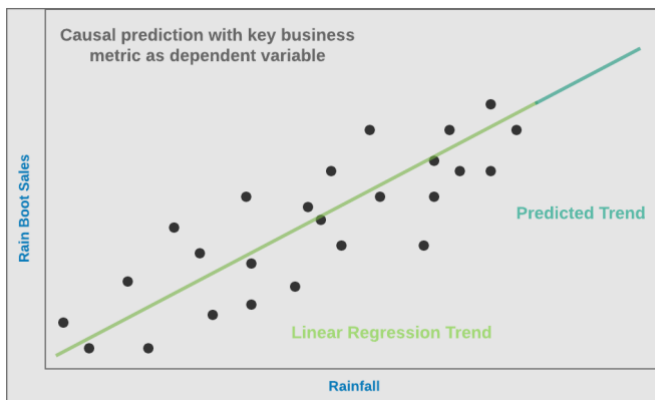


Time series methodologies are completely pattern based, therefore, a series of pattern nuances within the data must be detected and controlled for in order to ensure prediction accuracy. A few of the primary patterns to control for include:

Seasonality is the regular, predictable changes that occur every year. This can occur on a weekly basis with day of week differences, or with larger seasons like Christmas.

Cyclicity refers to regular fluctuations around trend that are not specifically tied to a time of year, think of larger economic expansions or contractions.

Autocorrelation is concerned with a trend line being correlated with itself at a different point in time, consider the idea of a predictable lag behavior given a certain trend.



Causal Forecasting differs from time series forecasting in that it estimates based on an assumption that a certain metric has a cause and effect relationship with one or more variables. The result is a prediction given an assumption, for example predicting rain boot sales via weather patterns. The most common causal forecasting method is regression modeling.

Next Steps

Our streamlined process involves a requirements gathering session for our team gain an understanding of media practices, technology capabilities and data resources. We then create the necessary data connections, and deliver our automated reporting suite. Audits of historical incrementality performance may also be available after the data connections have been made.

Contact Us

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About Us

We are a team of data science professionals focused on superlative computational mathematics and advanced data product solutions. The sole intention of our work is to serve our clients with actionable insight and honest transparency using genuine scientific practices.