Minitab® + Predictive Analytics

In today's data-driven landscape, organizations face challenges in extracting valuable insights from their observational data sets. Missing data points, prioritizing strong predictors over subtler contributors and the intimidating complexities of multiple regression modeling are common roadblocks in obtaining accurate and comprehensive analyses. However, Minitab offers a game-changing solution—Predictive Analytics—to overcome these obstacles and unlock the full potential of your data.

By delving into the power of advanced predictive algorithms and tools, such as CART®, Random Forests®, TreeNet ® and MARS®, Predictive Analytics goes beyond traditional regression approaches. With this powerful module, you can make well-informed decisions based on a deeper understanding of complex datasets, contributing to better outcomes and data-driven decision-making.

Current State:

Your observational data sets are missing data points. This reduces the statistical power and depth of insights obtained from your data.

Minitab's Solution:

Typical regression requires limiting data to only the values present, which can significantly reduce statistical power and insights.

Instead of disregarding incomplete records, Predictive Analytics leverages the power of predictive algorithms to impute and incorporate missing values into the analysis. With this, you can gain a comprehensive view of your data, enabling a more accurate understanding of patterns and relationships. It will enable you to make well-informed decisions based on a holistic analysis, contributing to better outcomes and a deeper understanding of complex datasets.

Moreover, the predictive algorithms employed in our tool include powerful tools like Multivariate Adaptive Regression Splines (MARS®), which work extremely well when non-linear trends are present. MARS® utilizes base functions to build a spline to best fit the data, providing users with a set of coefficients to quantify influence and identify interaction terms. This way, even with missing data, you can uncover intricate relationships and harness valuable insights.

The ability to utilize ALL your data, including observations with missing entries, sets Predictive Analytics apart as an essential tool for extracting valuable insights and data-driven decision-making.

Current State:

Conventional data analysis methods typically prioritize strong predictors, potentially overshadowing the valuable insights that subtle contributors provide. This imbalance can lead to an incomplete understanding of your data.

Minitab's Solution:

Dealing with large datasets often presents a challenging conundrum: identifying predictors with subtle influences amidst more dominant forces.

Predictive Analytics allows for equitable consideration of all predictors. Our advanced algorithms, such as Classification and Regression Trees (CART®), Random Forests® and TreeNet ®, ensure that all predictors, regardless of strength, receive consideration, uncovering hidden patterns and revealing the significance of subtle predictors.

When all predictors are considered, it is possible to discover previously unseen relationships and factors that influence outcomes. This approach leads to a more comprehensive understanding of the data and empowers you to make well-balanced decisions that consider the entire spectrum of factors.

By using Minitab's Education Hub, you can be sure that your team members are getting the right resources, at the right level, to excel in their roles.
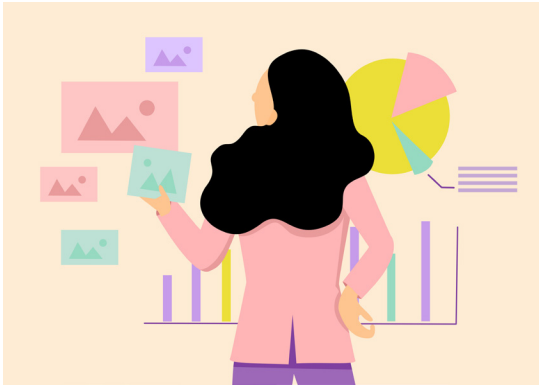
Current State:

Modeling multiple regression can be intimidating, demanding meticulous data diagnosis and adherence to stringent assumptions. Traditional methods often require extensive effort to minimize errors and ensure the accuracy of results.

Minitab's Solution:

As organizations navigate the ever-expanding landscape of data, the need for robust analysis becomes paramount. With Minitab's Predictive Analytics module, you can leave your worries behind. The solutions provided through this module are remarkably robust in handling the typical assumptions associated with multiple regression. It offers a focused view of the essential elements that need to be considered to achieve the most accurate results.

In simpler terms, our predictive analytics module simplifies the process and takes care of the technical complexities. The utilization of advanced tools like MARS®, CART®, Random Forests® and TreeNet® ensures that you can handle the intricacies of multiple regression analysis effortlessly while obtaining accurate results.

Current State:

Your go to tool is regression, and you *believe* it works well. It *may* not be your best bet.

Minitab's Solution:

Regression is a very popular tool for prediction and classification problems because of its ease of use, versatility and ability to deliver an understandable model. Today, Minitab's Predictive Analytics are just as easy to use and can provide richer insights and more accurate results. Automated Machine Learning can deliver your regression results compared to other methods to confirm your belief or introduce a better solution. Classification and Regression Trees (CART®) provide visualizations that may better explain relationships than a regression equation algorithm. Minitab's more advanced algorithms may provide more accurate predictions. Minitab's innovative approach allows you to build upon your current best practices and achieve better results across diverse data challenges.

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