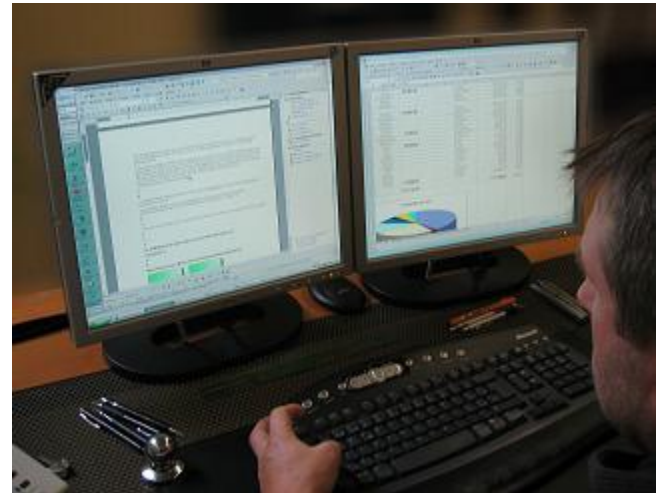




## Marketing Analytics

The marketing and communications landscape is becoming increasingly fragmented and segmented. Clutter is increasing. DM lists are producing less. But marketers can improve their success rate by leveraging advanced analytic techniques to achieve better targeting, more accurate segmentation, and improved CRM results (customer acquisition, retention, up-sell/cross-sell and lifetime value maximization).



SmartDrill has a broad array of advanced analytic tools for developing actionable solutions via the analysis of both **structured and unstructured data**. We have deep experience, from **classical inferential statistics** to the newest **machine learning** techniques. Depending on your project requirements, we might employ one or more of the following analytic approaches, as well as others not mentioned here.

Important: If you are not familiar with multivariate statistical techniques, please see our [introductory analytics](#) page that compares simpler methods of data analysis with more advanced ones, to gain a better understanding of the strengths and limitations of various methods.

**Note:** for some of the techniques listed below, there is a link to a detailed example of how the technique can be used to help solve a marketing problem. Some of those examples may include more technical information for those who are interested; but the reader can also skim or skip over those technical sections and still understand how the technique can help to solve business problems.

### [Search Engine Optimization \(SEO\) Analysis](#)

We employ in our SEO consulting practice very powerful SEO analysis software and state-of-the-art techniques to identify problems and to help website owners optimize their site for improved search engine page ranking.

## **Predictive Response or Profit Modeling for CRM**

- Predictive segmentation modeling (**CHAID**, Classification & Regression Trees, Qwest)
- Loyalty or "churn" analysis (Life Tables, Kaplan-Meier, **Cox Regression**)
- Linear and non-linear regression, 2-stage least squares, optimal scaling, probit
- Binary and multinomial **logistic regression**, loglinear analysis (general and logit)

## **Forecasting and Market Planning**

- Exponential smoothing
- Autoregression
- ARIMA (AutoRegressive Integrated Moving-Average time-series) modeling used for things such as:
  - **Sales forecasting**
  - **Understanding fluctuations in market share**
- Seasonal decomposition

## **Data Reduction and Perceptual Mapping**

- Factor analysis, principal components analysis
- Correspondence analysis
- Optimal scaling

## **Market Segmentation and Classification Analysis**

- Hierarchical, k-means and two-stage cluster analysis
- Discriminant analysis
- Predictive segmentation modeling (**CHAID**, Classification & Regression Trees, Qwest)

## **Preference- and Choice-Modeling for Product Development and Pricing**

- Choice-Based Conjoint (CBC) analysis and market share simulation modeling
- Multinomial Logit for multi-choice preference testing

## **Survey Scale Design and Analysis**

- Multidimensional scaling (e.g., ALSCAL, PROXSCAL)
- Scale reliability analysis (Cronbach's Alpha, Guttman, split-half, parallel/strict parallel)

## **Analysis of Variance**

- ANOVA
- GLM (univariate, multivariate and repeated measures General Linear Models; variance decomposition)
- LLM (Linear Mixed Models)

## Genetic Programming and Other Advanced Machine-Learning Techniques

- To assist with traditional quantitative analysis/modeling
- To perform semantic analysis and sentiment mining of unstructured text extracted from either internal client data or external sources such as blogs, forums, social media, etc.
- To solve difficult optimization problems in marketing and operations. This link takes you to an application of genetic programming to [transportation logistics problems](#).

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