

Direct Marketing Analytics with R

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Abstract

Direct marketing has traditionally claimed to be a quantified discipline. Marketing campaigns are measured by actual results. Testing is routinely done to improve performance. The concept of a control group is ingrained in the direct marketing culture. Modern marketing is based on *relevant* messaging. Segmentation is a practical way to deliver relevant communication to individuals.

That said, in practice there is a lot of confusion as to exact definition and implementation of specific metrics, methods, and statistical procedures. And, unfortunately, rigor is often more hype than actuality.

The goal of the dma package is to provide the direct marketing community with a well defined set of procedures to easily do direct marketing analytics. Since the source code is available, there is total visibility into the methods. No black box. No proprietary secrets.

At the end of the day, all needed analytics could be done manually in R, or most any other computing platform. The dma package wraps and bundles appropriate R procedures in a way direct marketers will, hopefully, find intuitive and natural to use. Having a single code base should eliminate errors and make results reproducible. We also leverage the graphics power of R to add visualizations that make the findings more intuitive than just presenting numerical results.

Direct marketing has certain characteristics which influence the design. These include:

- a huge N.
- very small proportions.
- users typically work in a Windows/Office environment.
- the paradox of the need for rigor and client comprehensibility.

There are three main modules in the dma package.

Basic Metrics: Straightforward definitions of key direct marketing performance indicators. These include response, profitability, and LTV metrics. The point is to implement these metrics based on accepted best practices in an open and transparent way.

Testing: In addition to single and multiple tests against a control (A/B and A/BCD... tests) visualizations are generated that make marketing campaign test results obvious to non-statisticians. Methods are wrapped to make them accessible to direct marketing staff without requiring any understanding of R.

Segmentation: The classic direct marketing segmentation method is RFM (Recency, Frequency, and Monetary). Using customer order history data, loaded into an orders object, recency and frequency are used to create actionable customer life-stage segments. Adding product purchase details allows creation of prospect relevant messaging tactics.