

Marketing Analytics in R

Jim Porzak
Ancestry.com
San Francisco, CA

Marketing analytics can be defined as the application of well known methods from statistics, data mining, and visualization to optimize marketing efforts – admittedly a rather broad topic.

This talk describes a basic tool kit aimed at modern marketing analysts who are expected to have basic statistical knowledge and are skilled in Excel and the other MS Office packages in the Windows environment, but are without any experience with R. These folks are at the front line of implementing, evaluating, and explaining the results of marketing campaigns and tests, both in the on-line and off-line worlds. Other aspects of marketing analytics, especially “customer intelligence,” segmentation, and predictive modeling have been discussed at prior useR! conferences.

Fundamental to campaign and test analytics is an appropriate data structure to support the detailed description of campaigns with multiple test cells and, perhaps, multiple responses within cells. The tests could be simple “A/B” tests or more interesting factor-based “MVT” designs. Since no campaign is ever done in isolation, it is also important to include between-campaign metadata for comparisons and rollups across media, offers, segment, etc.

The tool kit supports the all the basic steps a campaign analyst needs to go through:

- Initial reality check that available sample sizes will be sufficient for useful conclusions,
- Setting up the campaign test design and metadata,
- Random assignment of subjects to test cells,
- Detailed analysis of campaign results, and
- Visualization of campaign results for executive presentations.

The tool kit is designed modularly with well defined interface layers between the internal and external data sets and between the core functions and the user interface. Initially, we use Ian Fellows’ Deducr package for the user interface. A web based interface will be a future option.