Walmart Recruiting II: Sales in Stormy Weather

Predict how sales of weather-sensitive products are affected by snow and rain

485 teams · 2 years ago

Training Data

6 files

- noaa_weather_qclcd_d...
- key.csv.zip
- sampleSubmission.csv...
- test.csv.zip
- train.csv.zip
- weather.csv.zip

weather.csv.zip

Download File

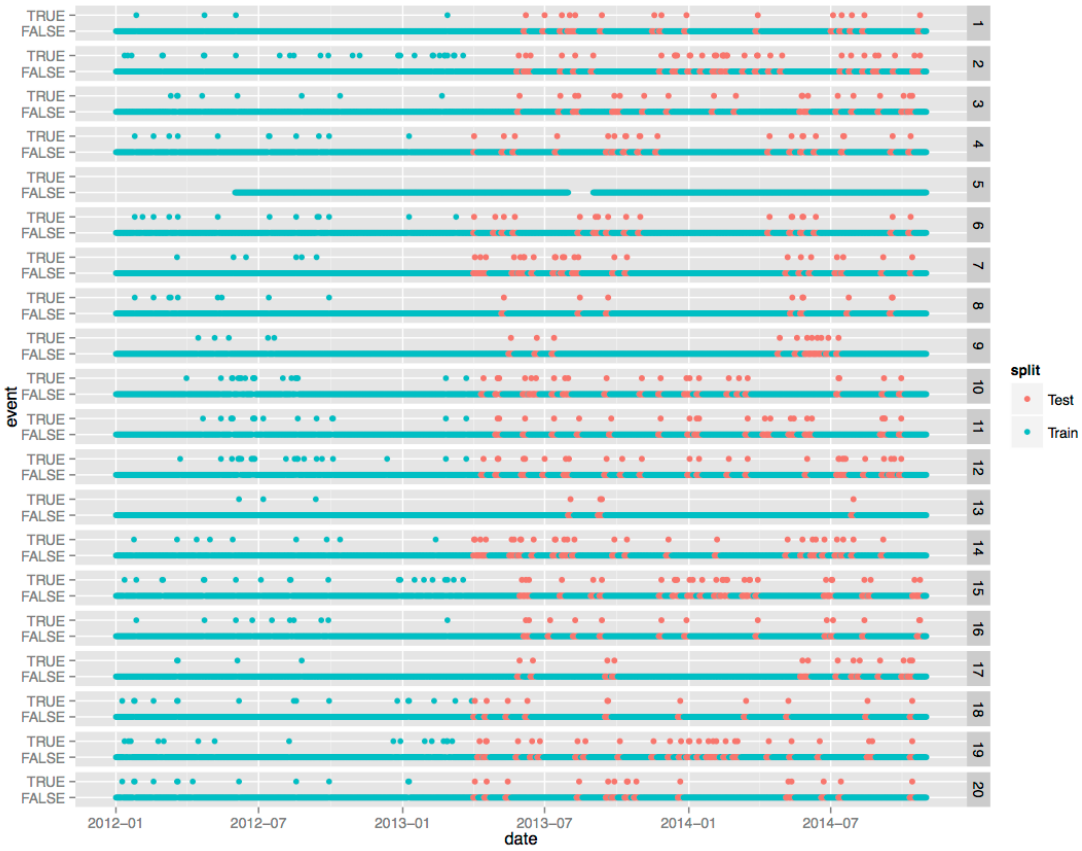
File size 431.77 KB

Data Introduction

You have been provided with sales data for 111 products whose sales may be affected by the weather (such as milk, bread, umbrellas, etc.). These 111 products are sold in stores at 45 different Walmart locations. Some of the products may be a similar item (such as milk) but have a different id in different stores/regions/suppliers. The 45 locations are covered by 20 weather stations (i.e. some of the stores are nearby and share a weather station).

The competition task is to predict the amount of each product sold around the time of major weather events. For the purposes of this competition, we have defined a weather event as any day in which more than an inch of rain or two inches of snow was observed. You are asked to predict the units sold for a window of ±3 days surrounding each storm.

The following graphic shows the layout of the test windows. The green dots are the training set days, the red dots are the test set days, and the event=True are the days with storms. Note that this plot is for the 20 weather stations. All days prior to 2013-04-01 are given out as training data.



You are provided with the full observed weather covering the entire data set. You do not need to forecast weather in addition to sales (it's as though you have a perfect weather forecast at your disposal).

- You will not be provided with more information about the products, store locations, or other details.
- Because the storms occur at variable times and in variable locations, use the test set file (or sample submission) as your guide to know which days and stores you must forecast.
- The sales data does not capture the difference between the stock and the demand. In other words, sales number 0 doesn't necessarily mean there was no demand for this product; it may mean it was in stock but none were sold, or it could mean that the product was out of stock, or discontinued and not available.

Field descriptions

- date - the day of sales or weather
- store_nbr - an id representing one of the 45 stores
- station_nbr - an id representing one of 20 weather stations
- item_nbr - an id representing one of the 111 products
- units - the quantity sold of an item on a given day
- id - a triplet representing a store_nbr, item_nbr, and date. Form the id by concatenating these (in that order) with an underscore. E.g. "2_1_2013-04-01" represents store 2, item 1, sold on 2013-04-01.

File descriptions

- key.csv - the relational mapping between stores and the weather stations that cover them

- sampleSubmission.csv - file that gives the prediction format
- train.csv - sales data for all stores & dates in the training set
- test.csv - stores & dates for forecasting (missing 'units', which you must predict) **NOTE: This file has been encrypted. To get the password, please fill out Walmart's Recruiting Survey**
- weather.csv - a file containing the NOAA weather information for each station and day
- noaa_weather_qclcd_documentation.pdf - a guide to understand the data provided in the weather.csv file