# Carrefour Sales

Anomaly Detection

library(tidyverse)

## -- Attaching packages --------------------------------------- tidyverse 1.3.0 --

## v ggplot2 3.3.3 v purrr 0.3.4  
## v tibble 3.1.0 v dplyr 1.0.5  
## v tidyr 1.1.3 v stringr 1.4.0  
## v readr 1.4.0 v forcats 0.5.1

## Warning: package 'tibble' was built under R version 4.0.5

## -- Conflicts ------------------------------------------ tidyverse\_conflicts() --  
## x dplyr::filter() masks stats::filter()  
## x dplyr::lag() masks stats::lag()

library(anomalize)

## Warning: package 'anomalize' was built under R version 4.0.5

## == Use anomalize to improve your Forecasts by 50%! =============================  
## Business Science offers a 1-hour course - Lab #18: Time Series Anomaly Detection!  
## </> Learn more at: https://university.business-science.io/p/learning-labs-pro </>

tidyverse\_cran\_downloads

## # A tibble: 6,375 x 3  
## # Groups: package [15]  
## date count package  
## <date> <dbl> <chr>   
## 1 2017-01-01 873 tidyr   
## 2 2017-01-02 1840 tidyr   
## 3 2017-01-03 2495 tidyr   
## 4 2017-01-04 2906 tidyr   
## 5 2017-01-05 2847 tidyr   
## 6 2017-01-06 2756 tidyr   
## 7 2017-01-07 1439 tidyr   
## 8 2017-01-08 1556 tidyr   
## 9 2017-01-09 3678 tidyr   
## 10 2017-01-10 7086 tidyr   
## # ... with 6,365 more rows

tidyverse\_cran\_downloads %>%  
 time\_decompose(count) %>%  
 anomalize(remainder) %>%  
 time\_recompose() %>%  
 plot\_anomalies(time\_recomposed = TRUE, ncol = 3, alpha\_dots = 0.5)

## Registered S3 method overwritten by 'quantmod':  
## method from  
## as.zoo.data.frame zoo

