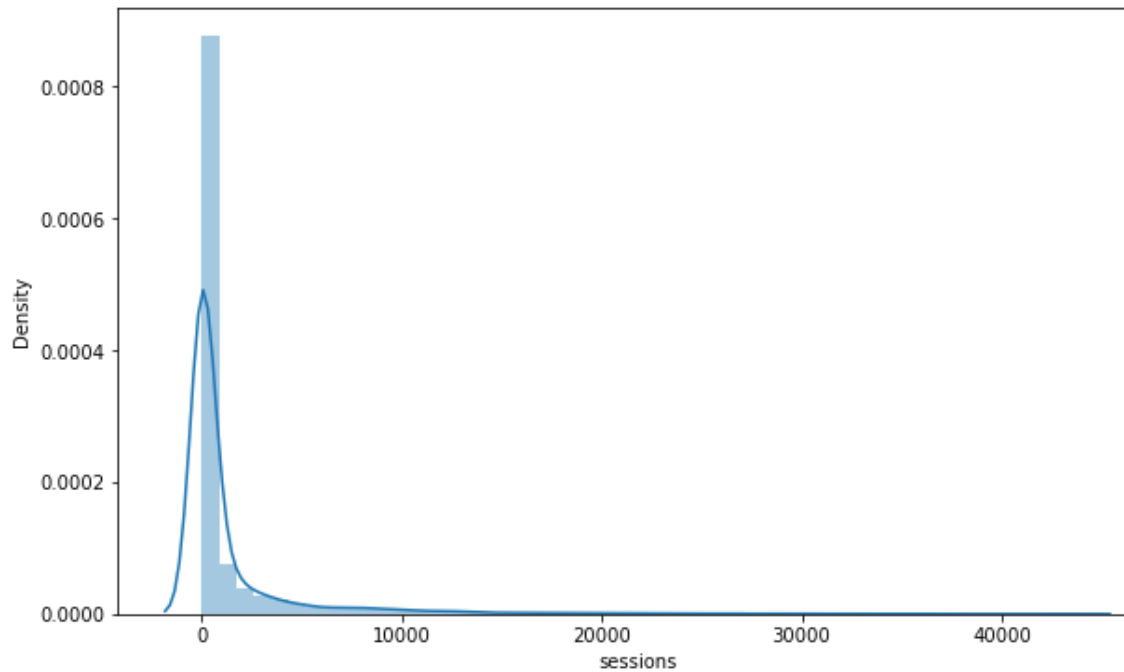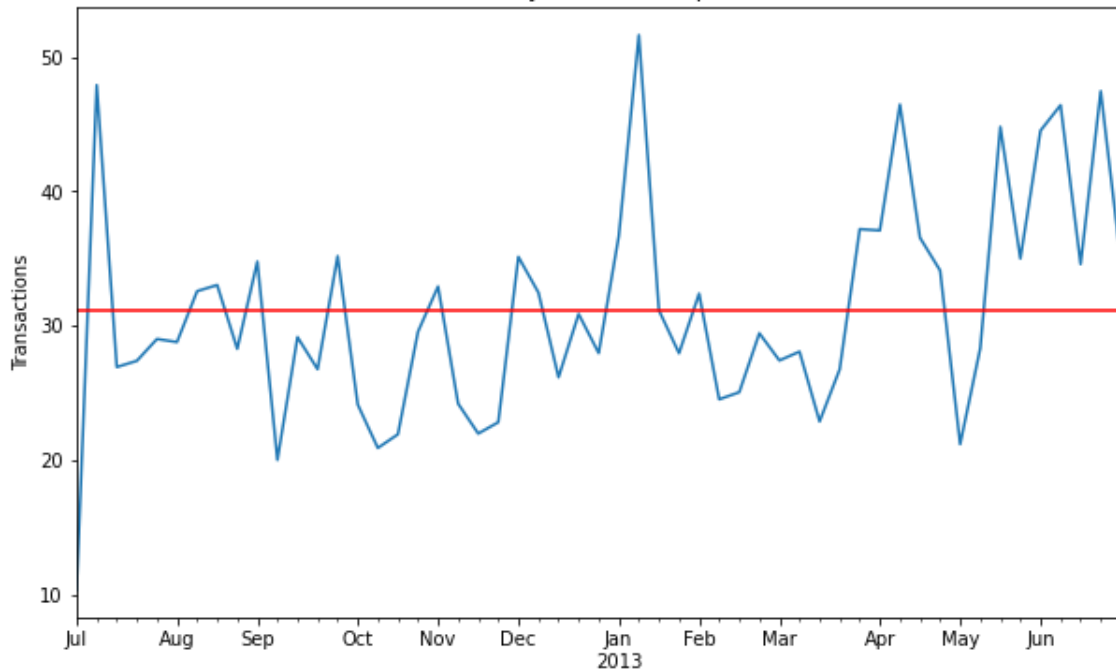# Retail Website Performance

*Analysis and Recommendations*

Distribution of the number of sessions


Weekly transactions plot

# Analysis of the website's sessions dataset

## Numerical data

+ The original data observed daily for the number of sessions, transactions and quantity ordered is skewed at zero

+ Nevertheless these metrics such as the average weekly sessions and transactions data and the average ECR (conversion rates) remain stable about their average values

+ The metrics aggregated weekly show some seasonal patterns with peak performances in July 2012, January and April 2013

+ The best average transactions in the data occurred in the third quarter of 2012 and second quarters of 2013

# Analysis of the website's sessions dataset

**Non numerical data**

+ The most used devices on the retail website were mobile devices

+ Desktop devices accounted for the most number of average monthly transactions and overall quantity sold from the website

+ Tablet devices had the most conversion rates on average from month to month



Quantity sold by device type



Count of Device usage



Average conversion rates based on device
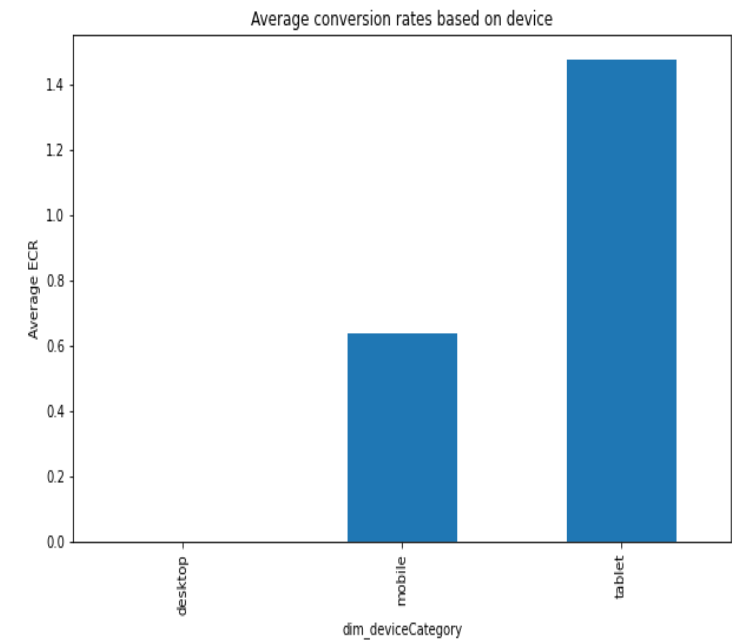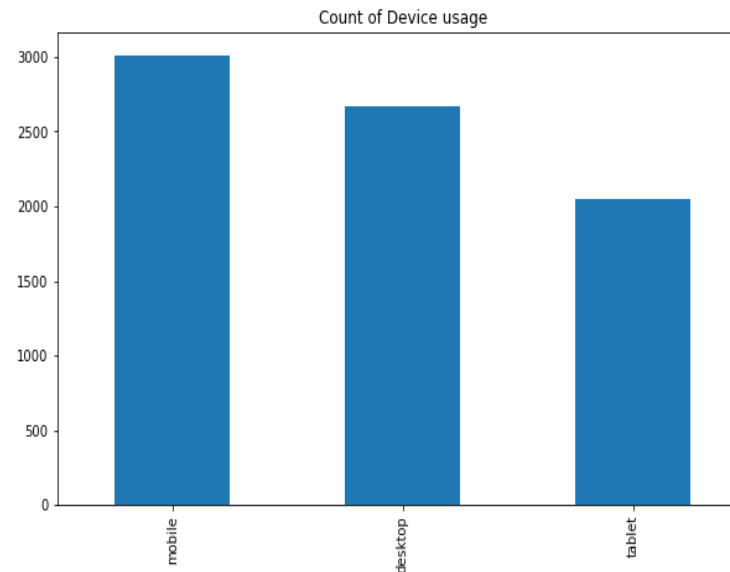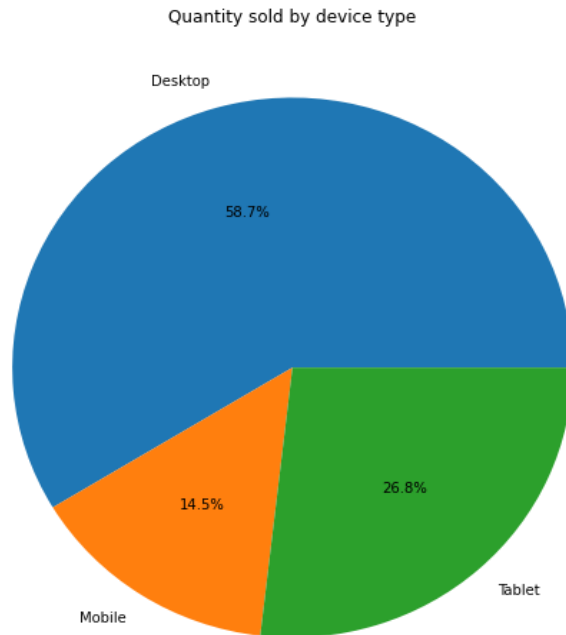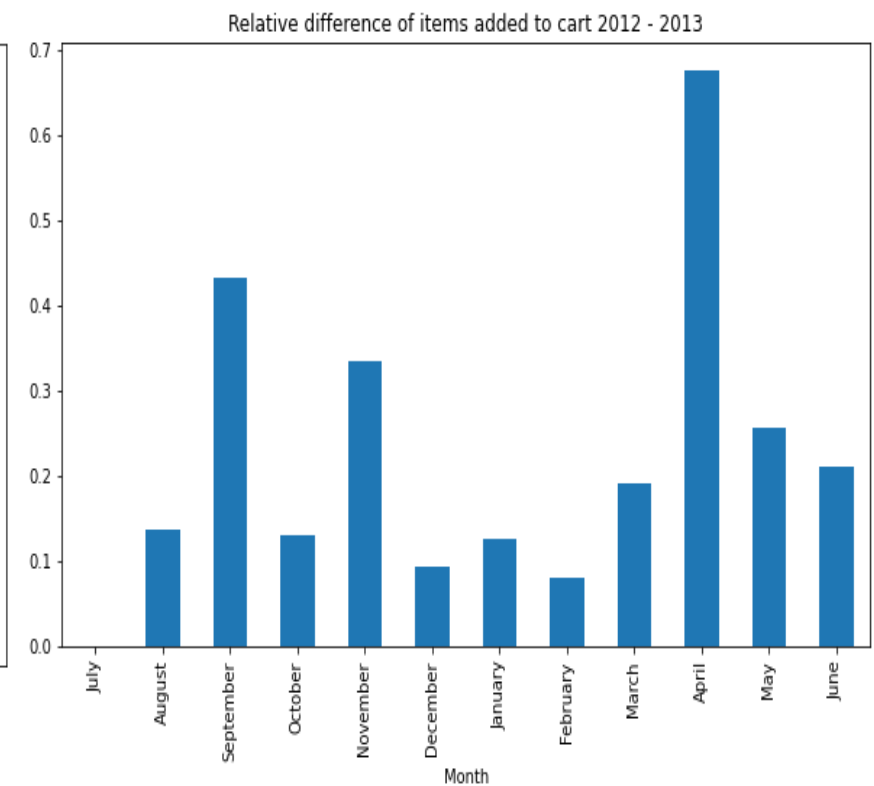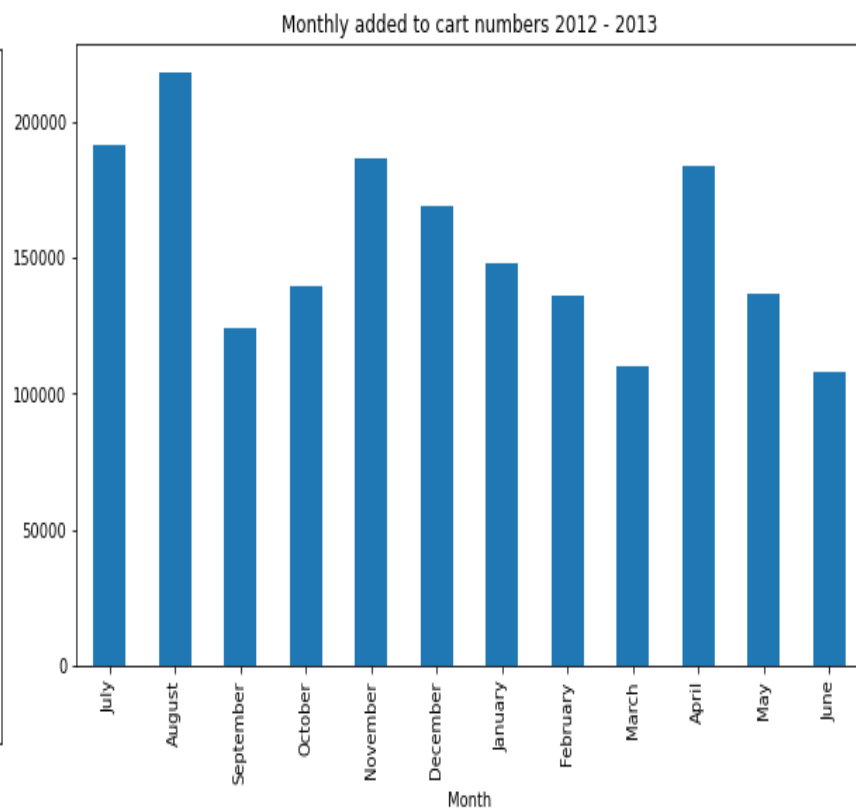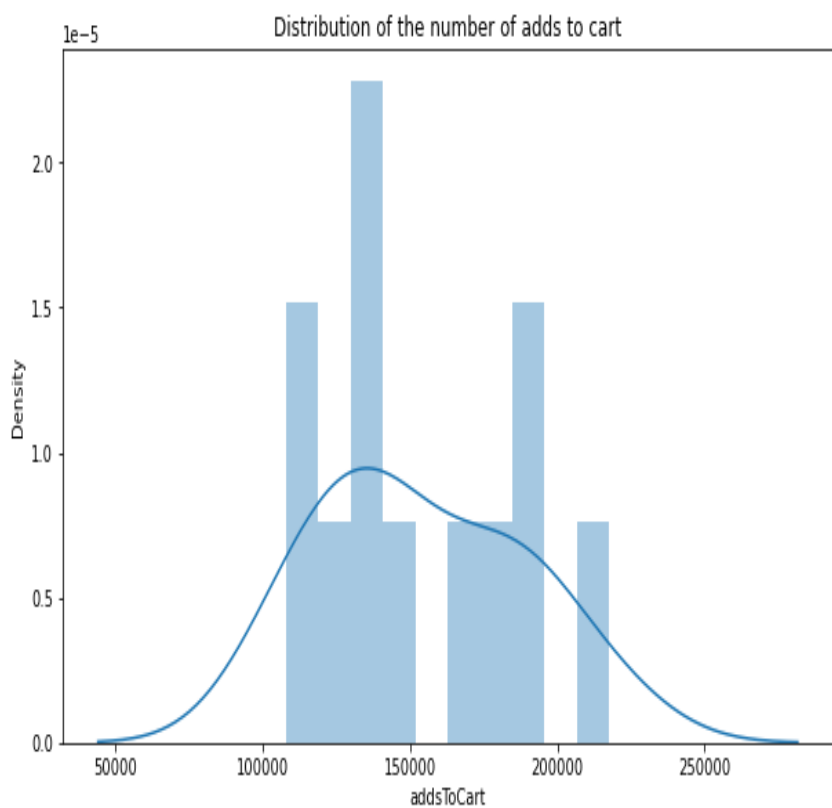
**Analysis of the cart numbers data**

+ The distribution of the monthly cart data is approximately bell shaped with an average of 125000

+ The best months for the number of items customers added to their carts occurred in the third and fourth quarters

+ From the relative differences in cart numbers from month to month the biggest increase occurred from March to April of 2013 which was 67%

# Recommendations/next steps

+ During off season periods for instance fourth quarter months offer promotions or some discounts to improve sales and during the in season period provide items on the website that are predominantly in demand.

+ Good web hosting and load balancing of web traffic can help drive sales especially for desktop users. The website should be portable device compactible for customers to have a good shopping experience.

+ To attract new users or improve conversion rates for portable device users a web app for the retail site can be used with some promotional offers for first time use. Other promotional offers like free shipping past a certain quantity can drive sales as well.

+ Advertisement campaigns using social media especially for mobile users. Search engine optimization can be used to drive more traffic to the website using target products customers would want to buy on the retail site.