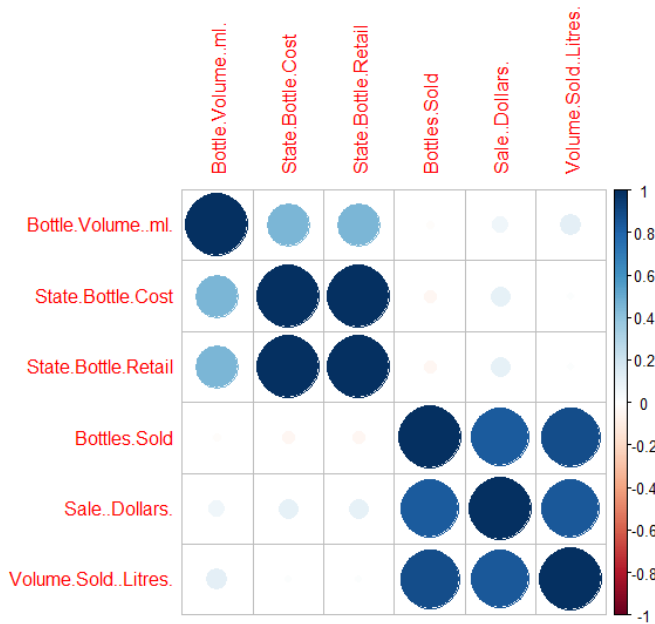
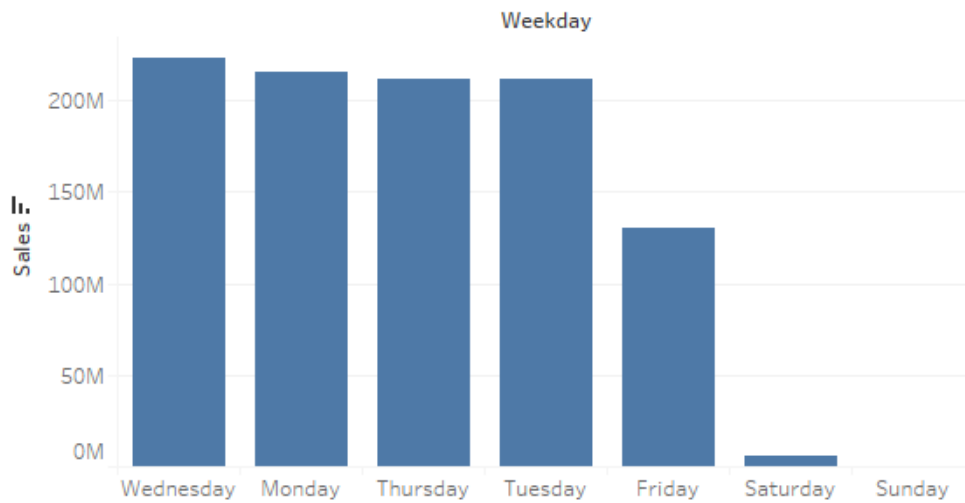


## Preliminary Analysis

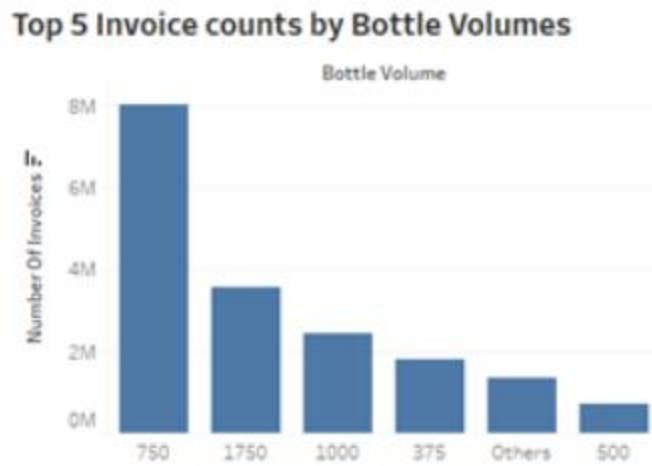


**Figure 1:** Correlation matrix of numeric variables.

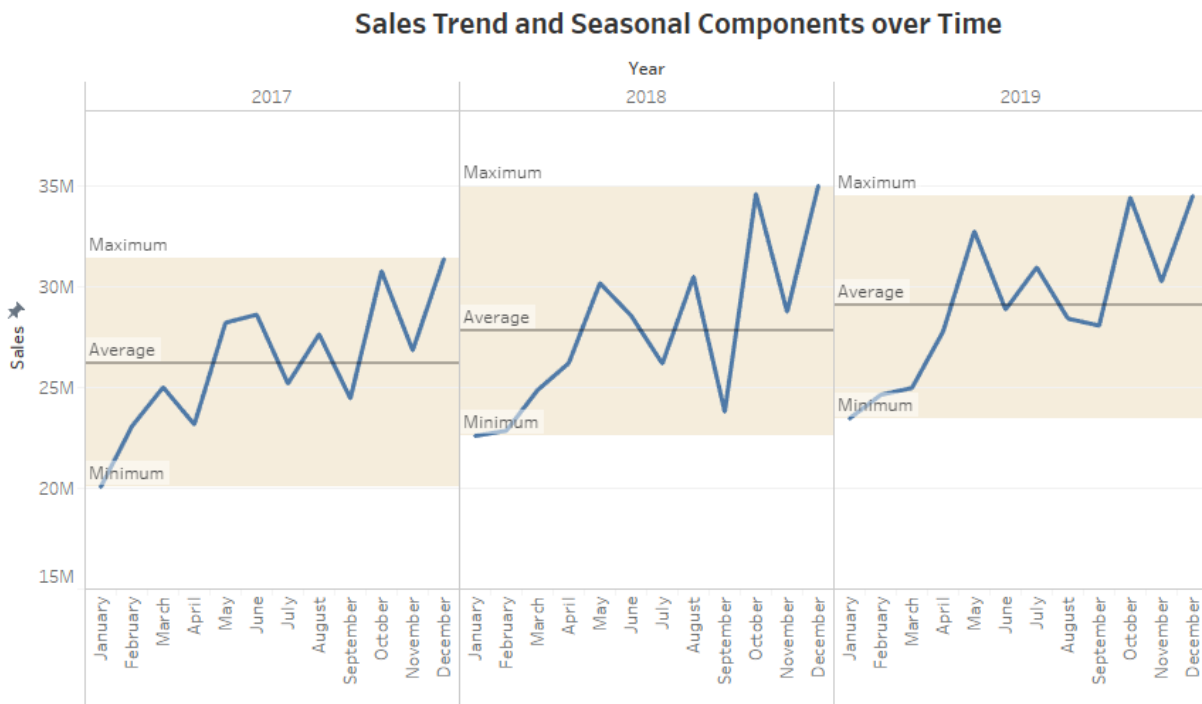
## Sales by day of week



**Figure 2:** Week of day analysis



**Figure 3:** Categorizing insignificant bottle volumes into one group



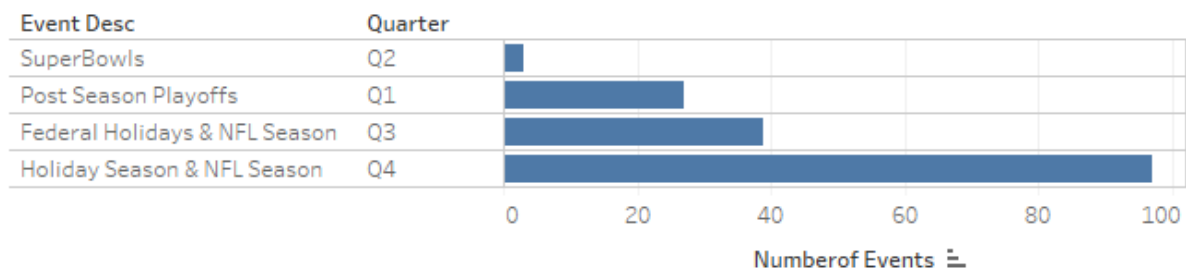
**Figure 4:** Three-year sales over months.

## NFL Analysis

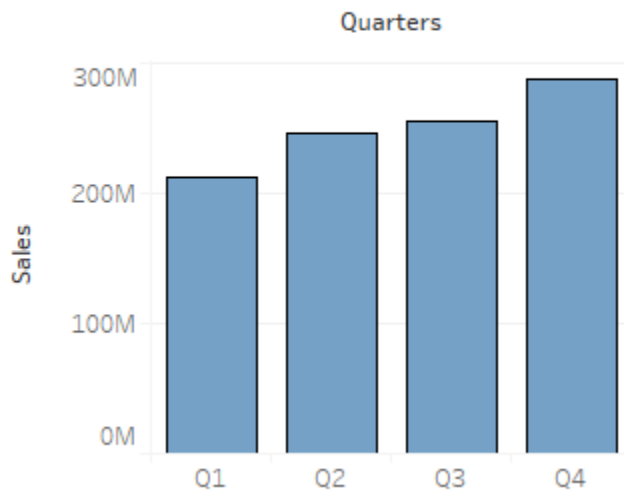
### NFL - Number of Gamedays by month

Weekday/Weekend	Month Played					
	January	February	September	October	November	December
Weekday (Mon or Thu)			22	22	18	12
Weekend (Sat or Sun)	15	3	11	11	8	14

### Number of Events by Quarter

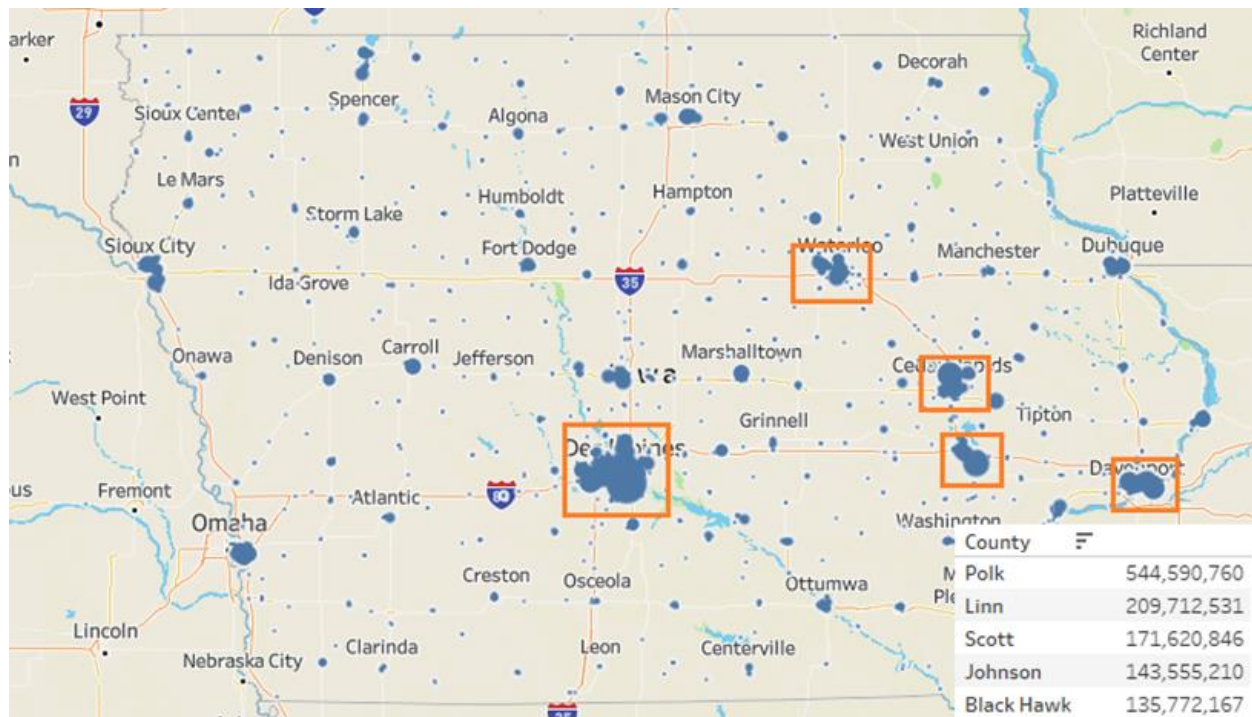


### Sales by Quarter



```
> (sum(FourQ$Sales)-sum(FirstQ$Sales))/sum(FirstQ$Sales)*100  
[1] 35.46186
```

**Figure 5:** Showing 35% increase in sales during holiday and NFL seasons.



**Figure 6:** Highlighted frames of top 5 counties within IOWA.

**Fun Fact:** George Washington's birthday is on Feb 22, 1732. It is always celebrated on the 3<sup>rd</sup> Monday of February. The third Monday of any month will never fall on 22<sup>nd</sup> which implies that we never celebrate Washington's birthday on his real birth date.

Same logic applies to Martin Luther King's birthday. On average, we celebrate it on the actual day once every two decades and twice every 3<sup>rd</sup> decade.

```
#-----George Washington's birthday-----
#February 22, 1732

unique(which weekdays(seq(from = as.Date("2000-01-01"),
                           to = as.Date("2099-12-31"),
                           by = 'days'))
        == "Monday")
        == 22) #NONE/FALSE
```