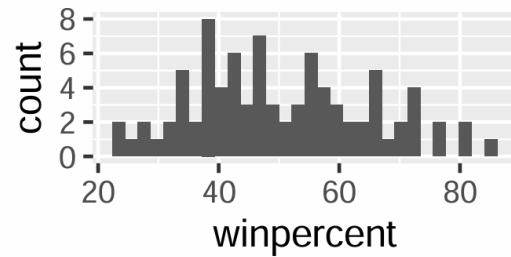
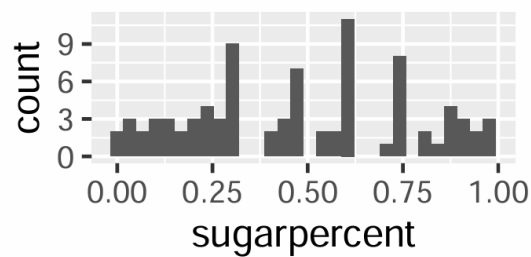
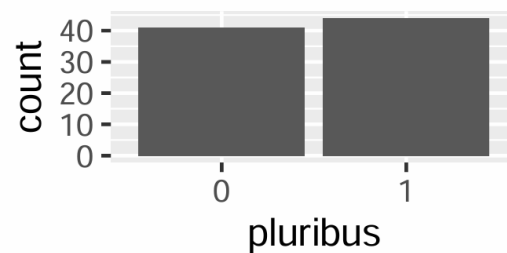
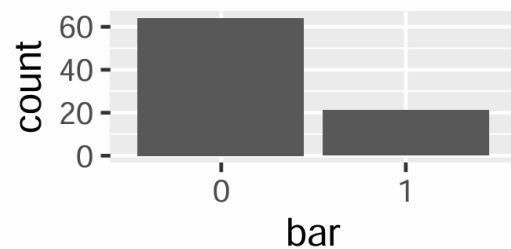
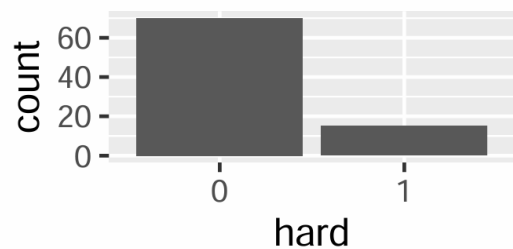
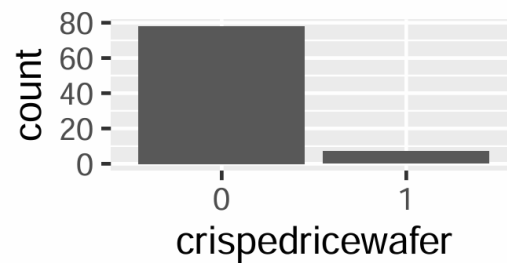
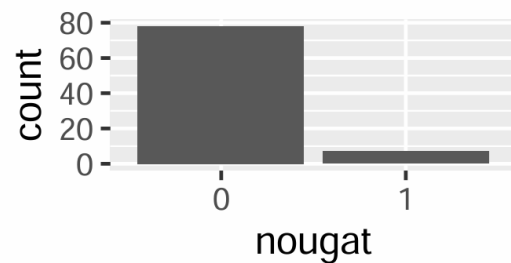
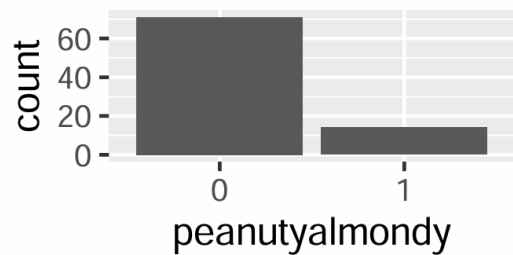
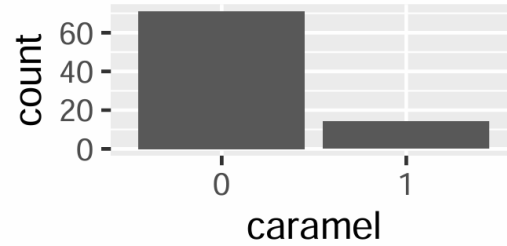
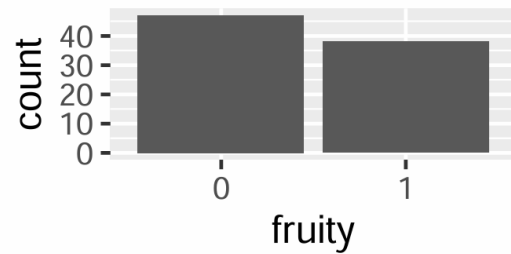
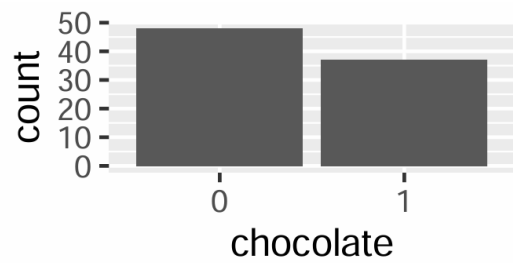


The background is a dark, atmospheric photograph of Halloween decorations. In the center, a black bowl is filled with candy corn. Behind it, two jack-o'-lanterns with carved faces are visible. The scene is set on a wooden surface with a piece of burlap fabric. Several small, black plastic spiders are scattered around, including one in the bottom left and another in the bottom right. The overall lighting is dim, creating a spooky and festive mood.

What makes a Halloween candy desirable?

ANAV VORA AND LAVANYA KUDLI



Potential Influencers

Model Fitting

The overall F-test of the model reveals that at least one of the betas is not zero (p-value of overall F-test = 5.25×10^{-9})

```
call:
lm(formula = winpercent ~ ., data = Candy_Data_Subset)
```

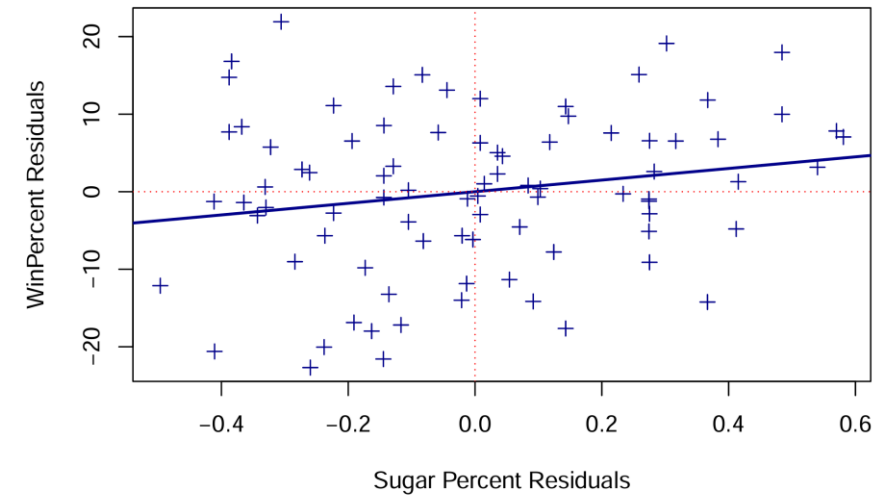
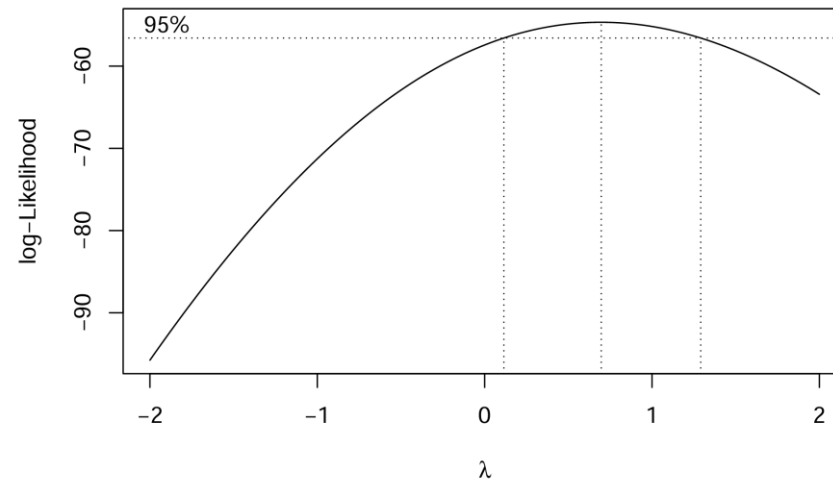
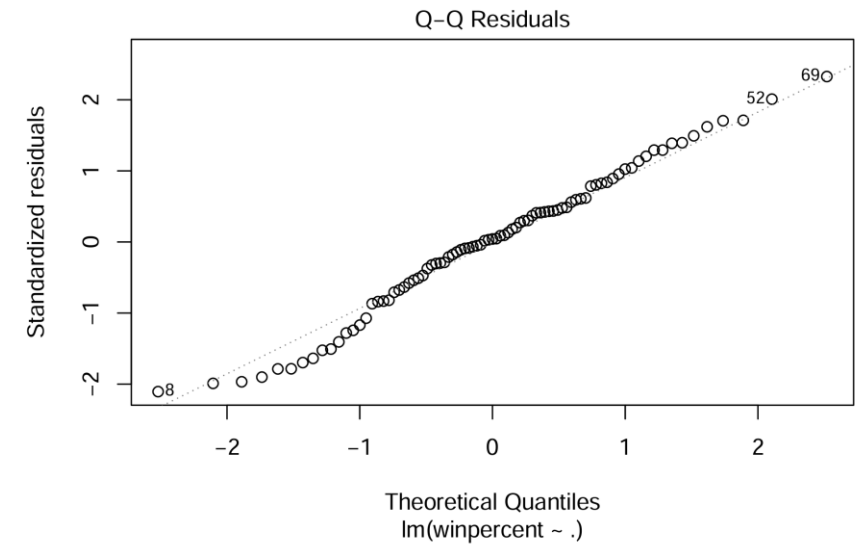
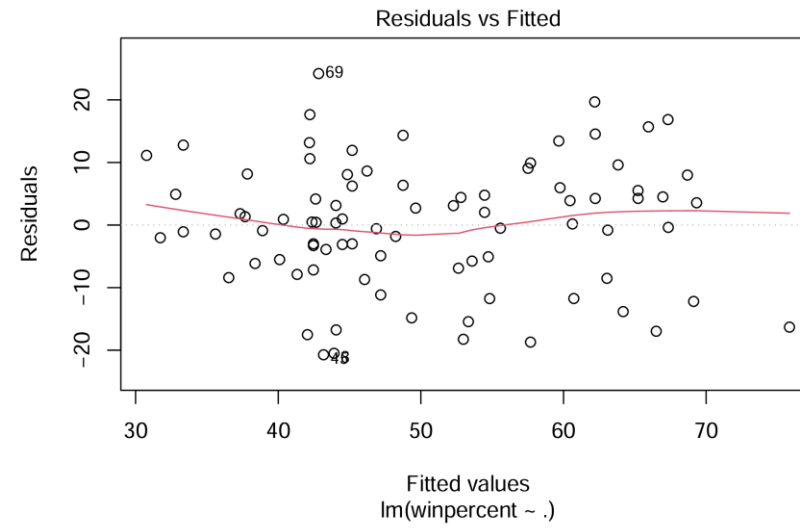
Residuals:

Min	1Q	Median	3Q	Max
-20.7320	-6.1438	0.4359	6.2276	24.2048

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	33.262	4.159	7.997	1.31e-11	***
chocolate1	19.216	3.871	4.964	4.30e-06	***
fruity1	9.587	3.764	2.547	0.01294	*
caramel1	1.982	3.654	0.542	0.58918	
peanutyalmondy1	9.454	3.574	2.645	0.00996	**
nougat1	1.918	5.628	0.341	0.73422	
crispedricewafer1	8.637	5.267	1.640	0.10529	
hard1	-5.866	3.448	-1.701	0.09306	.
bar1	-1.233	4.821	-0.256	0.79879	
pluribus1	-1.147	3.031	-0.378	0.70629	
sugarpercent	7.490	4.421	1.694	0.09444	.

Diagnostics



Fine Tuning and Interpretation

```
#Now dropping peanutyalmondy also (next largest p value)
candy.red9 = lm(winpercent ~ chocolate, data=Candy_Data_Subset)
anova(candy.red9,Candy.mlr)

## Analysis of Variance Table
##
## Model 1: winpercent ~ chocolate
## Model 2: winpercent ~ chocolate + fruity + caramel + peanutyalmondy +
##          nougat + crispedricewafer + hard + bar + pluribus + sugarpercent
##   Res.Df    RSS Df Sum of Sq    F Pr(>F)
## 1      83 10818.5
## 2      74  8494.7  9    2323.8 2.2493 0.02774 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
summary(candy.final)
```

```
##
## Call:
## lm(formula = winpercent ~ chocolate + peanutyalmondy, data = Candy_Data_Subset)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -26.0296  -7.6657   0.0797   7.3629  25.2130
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)      41.825      1.619  25.828 < 2e-16 ***
## chocolate1       16.625      2.640   6.297 1.42e-08 ***
## peanutyalmondy1   7.623      3.529   2.160 0.0337 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 11.17 on 82 degrees of freedom
## Multiple R-squared:  0.4372, Adjusted R-squared:  0.4235
## F-statistic: 31.85 on 2 and 82 DF,  p-value: 5.822e-11
```