Module 4 Assignment 1

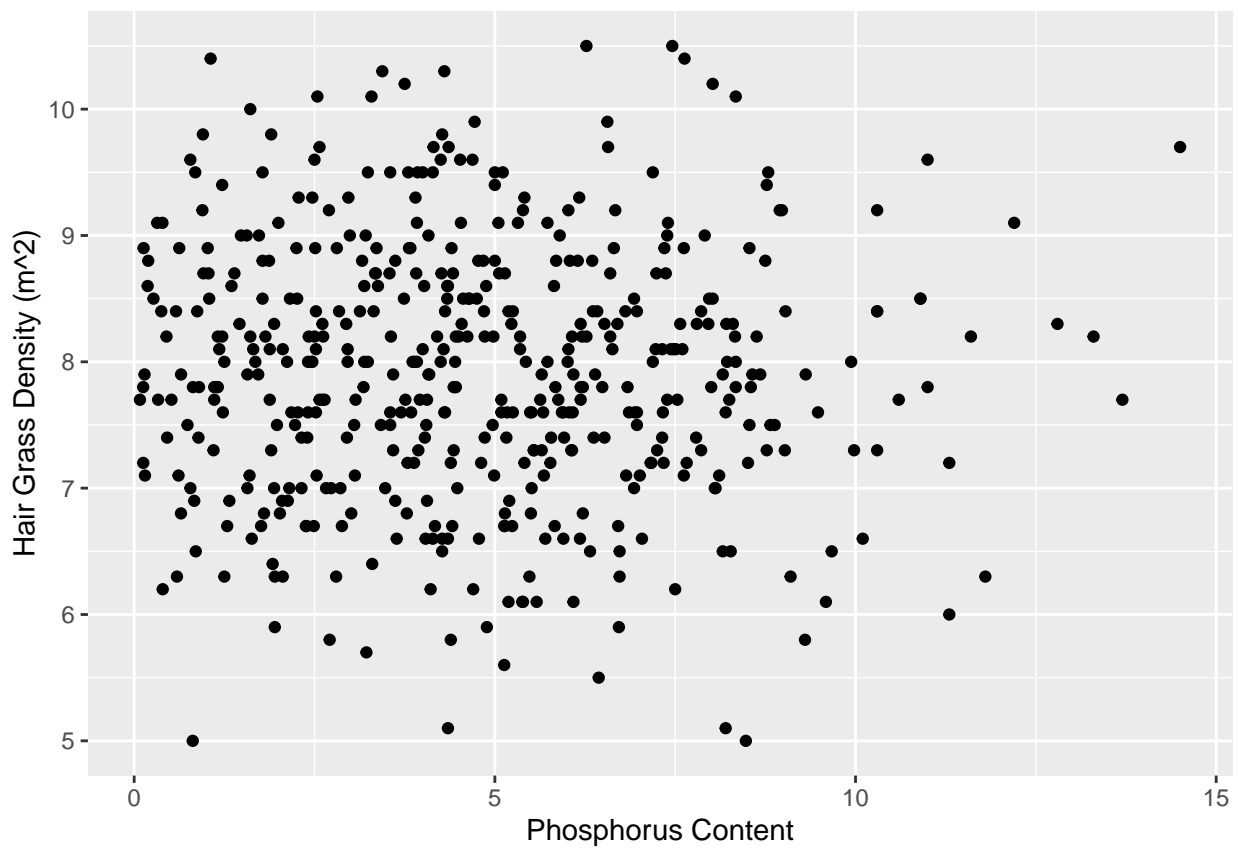### Ellen Bledsoe

2023-04-10

1.

```
## # A tibble: 1 x 2
##   mean_P stdev_P
##    <dbl>   <dbl>
## 1   4.76    2.75
```
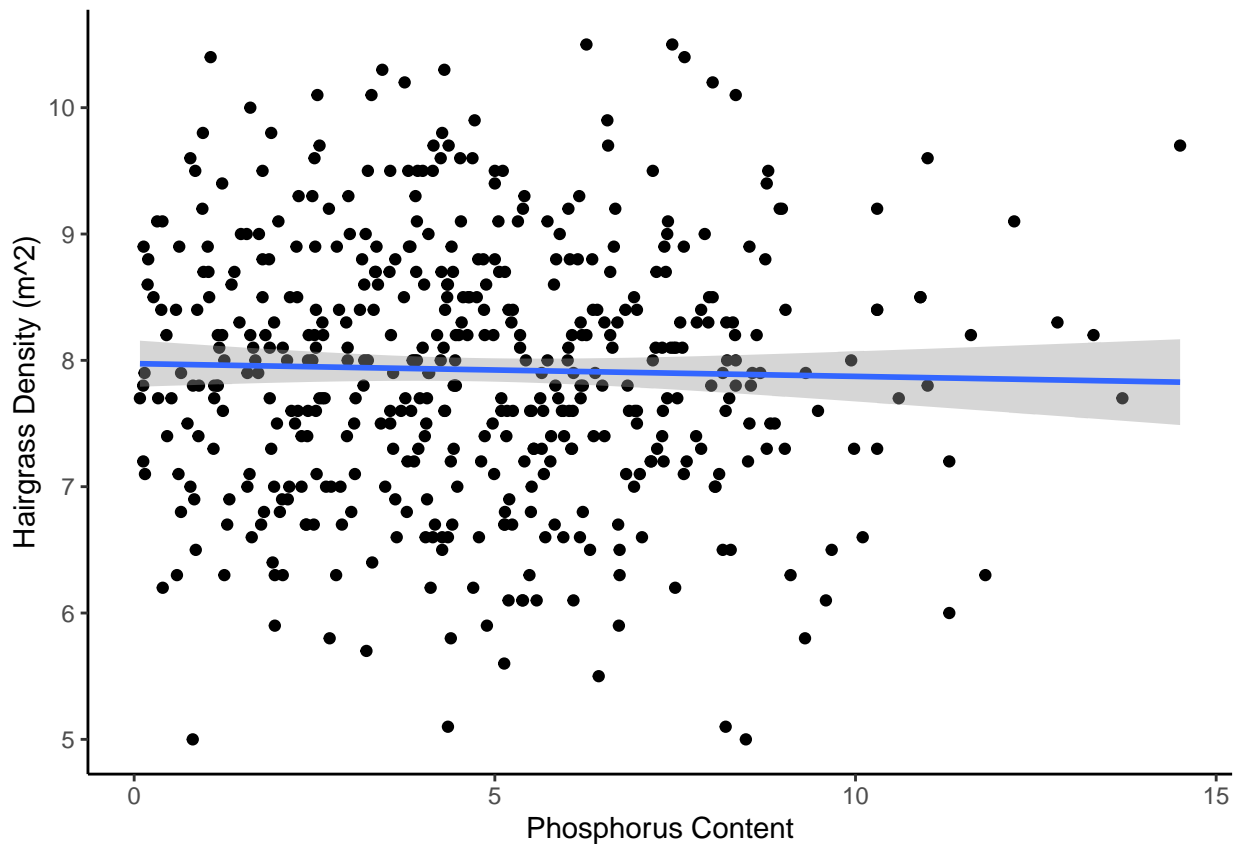
3.

5.

```
## [1] -0.02708762
```
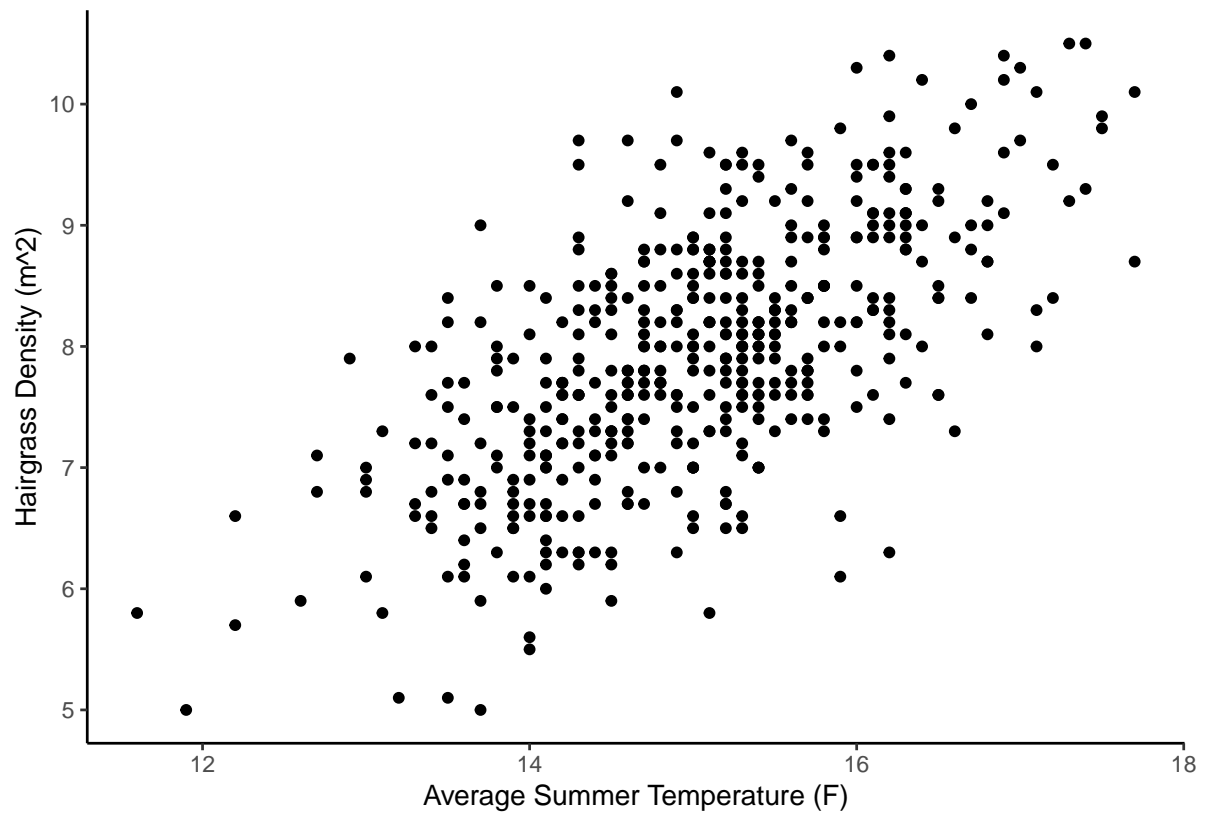
6.

```
## [1] 0.0007337394
```

8.

```
## `geom_smooth()` using formula = 'y ~ x'
```


9.

```
##
## Call:
## lm(formula = hairgrass$hairgrass_density_m2 ~ hairgrass$p_content)
##
## Residuals:
##      Min      1Q   Median      3Q      Max
## -2.96603 -0.66070  0.01303  0.66970  2.60124
##
## Coefficients:
##                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)          7.97425    0.09393  84.898   <2e-16 ***
## hairgrass$p_content -0.01012    0.01708  -0.592    0.554
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.028 on 478 degrees of freedom
## Multiple R-squared:  0.0007337,  Adjusted R-squared:  -0.001357
## F-statistic: 0.351 on 1 and 478 DF,  p-value: 0.5538
```
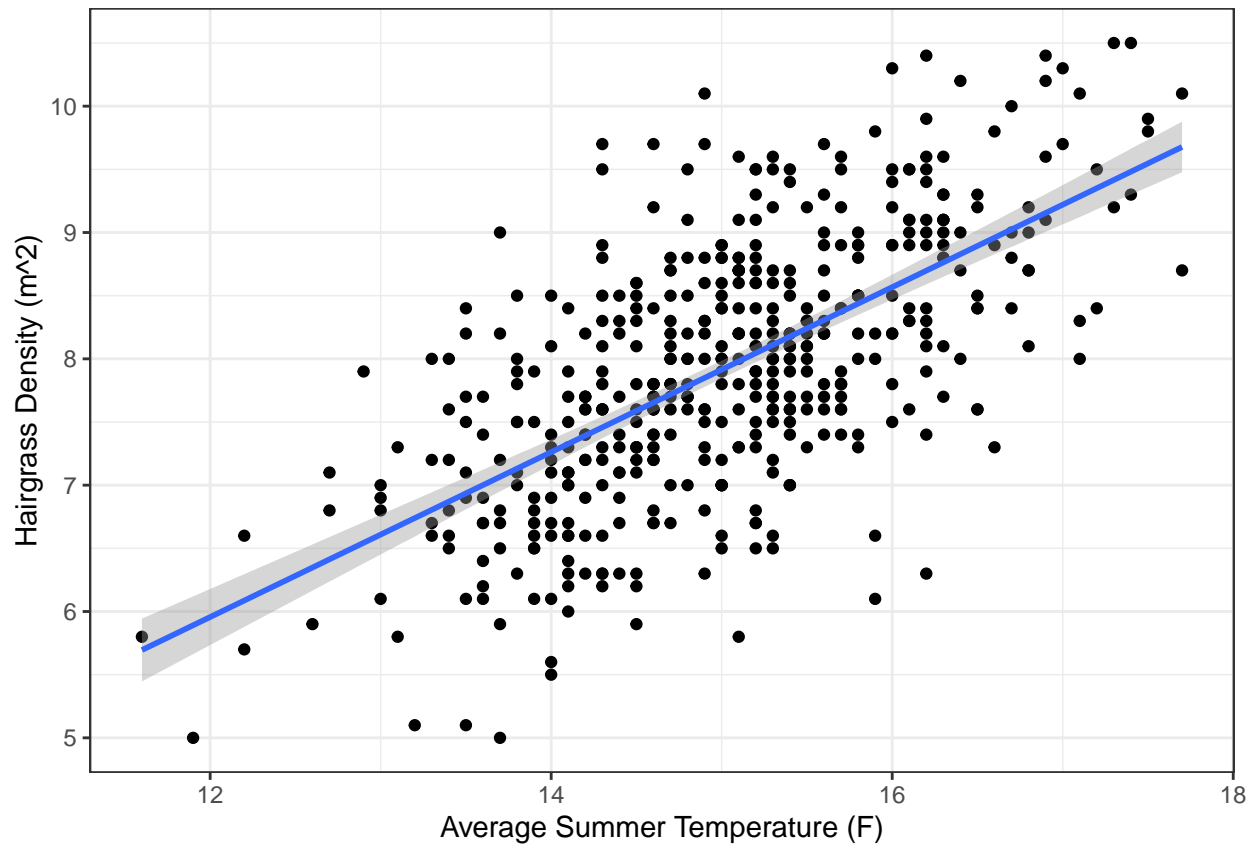
12.

13.

```
## [1] 0.643731
```

15.

```
## [1] 0.4143896
```

16.

```
## `geom_smooth()` using formula = 'y ~ x'
```

17.

```
##
## Call:
## lm(formula = hairgrass$hairgrass_density_m2 ~ hairgrass$avg_summer_temp)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -2.40214 -0.49902 -0.01046  0.51215  2.25066
##
## Coefficients:
##                           Estimate Std. Error t value Pr(>|t|)
## (Intercept)                -1.8774     0.5343  -3.514 0.000483 ***
## hairgrass$avg_summer_temp   0.6528     0.0355  18.391  < 2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.7869 on 478 degrees of freedom
## Multiple R-squared:  0.4144, Adjusted R-squared:  0.4132
## F-statistic: 338.2 on 1 and 478 DF,  p-value: < 2.2e-16
```