Final Report

due November 16, 2021 by 11:59 PM

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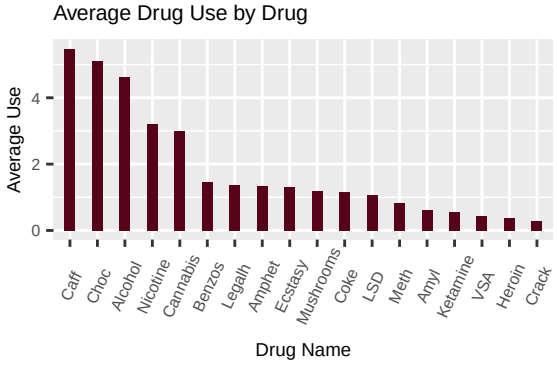
Abstract:

Background and Significance:

Methods: a) Data Collection and Variables

b) Exploratory Data Analysis



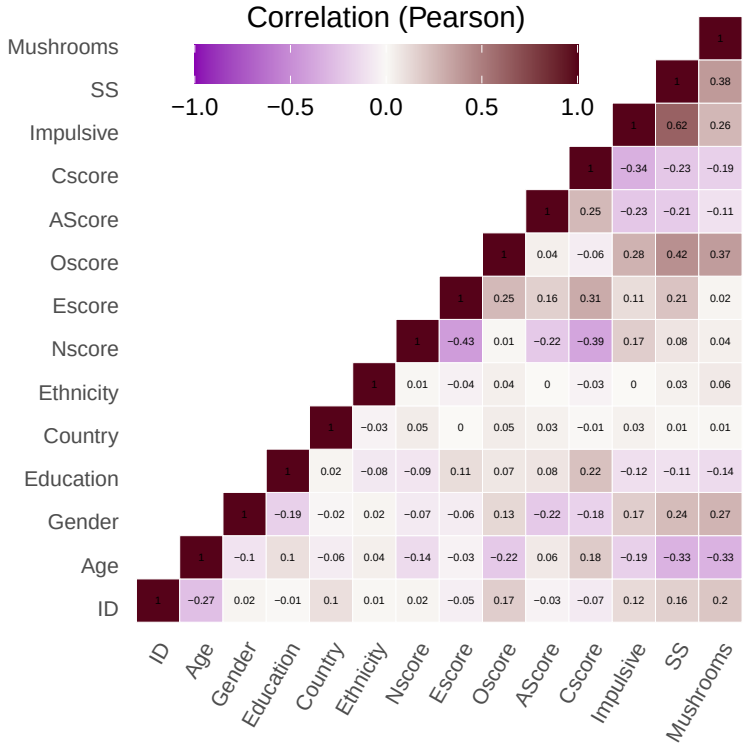
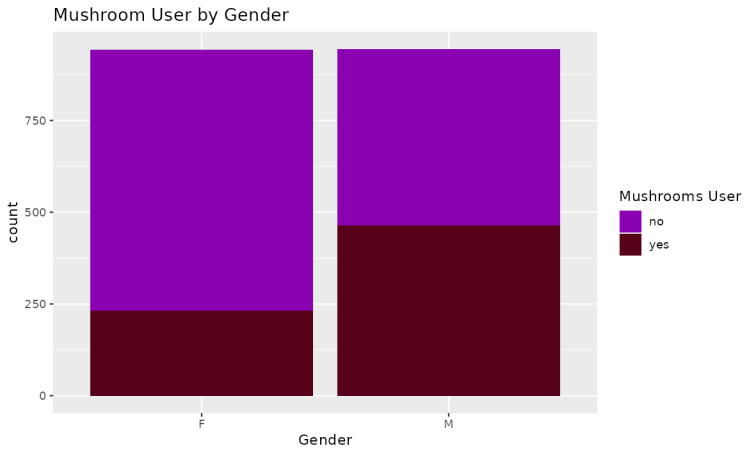


Table 1: Difference in Number of Users and Non-Users by Drug

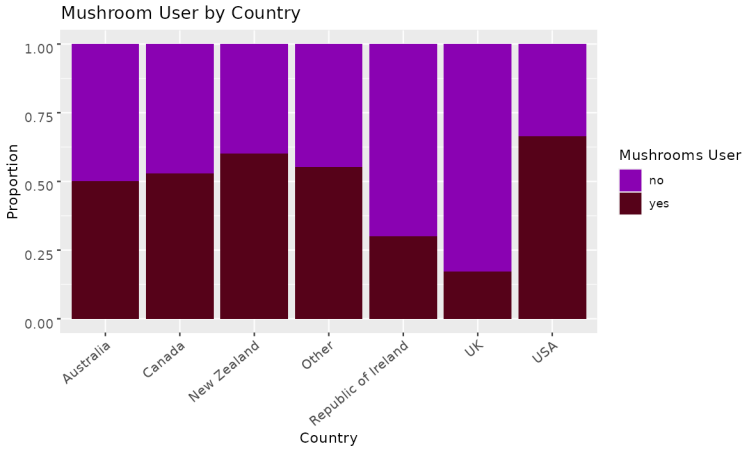
diff	drug
349	Benzos_User
361	LegalHighs_User
383	Ecstasy_User
497	Mushrooms_User
511	Cocaine_User
529	Amphetamine_User

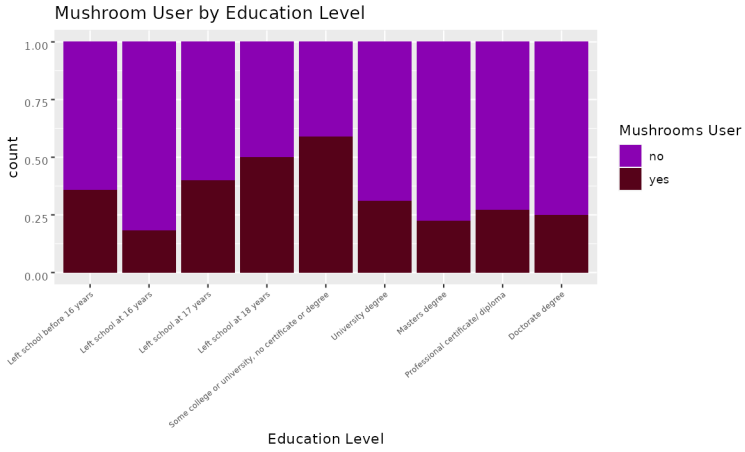
c) Analytical Methods

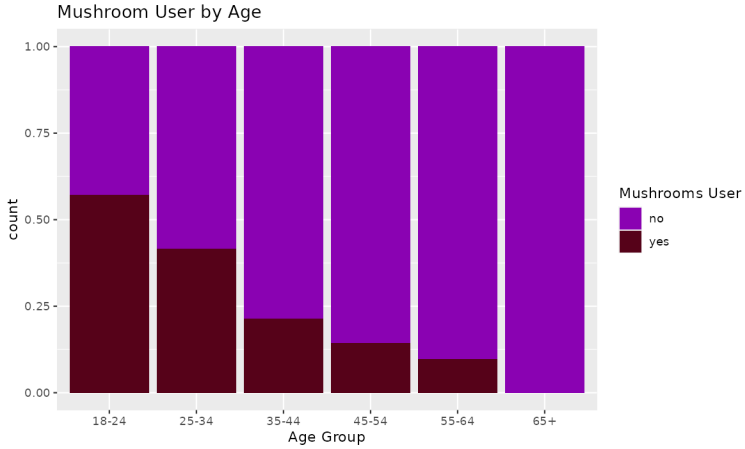


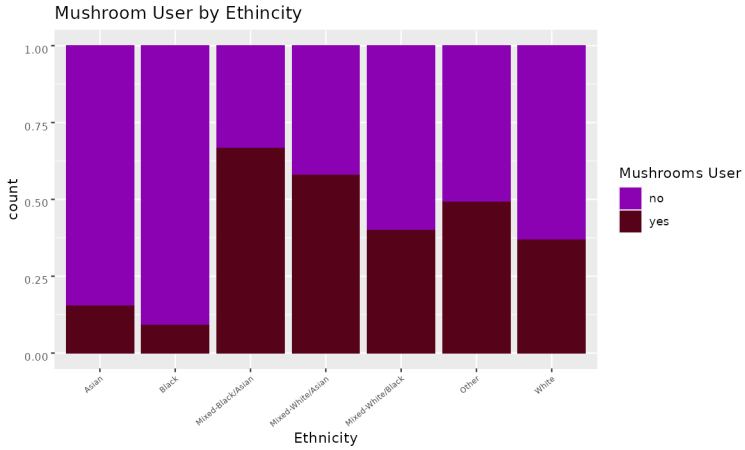

```
##
##  Fisher's Exact Test for Count Data
##
## data:  drug_clean_2$Gender and drug_clean_2$Mushrooms_User
## p-value < 2.2e-16
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  2.426426 3.624594
## sample estimates:
## odds ratio
##   2.962888
```

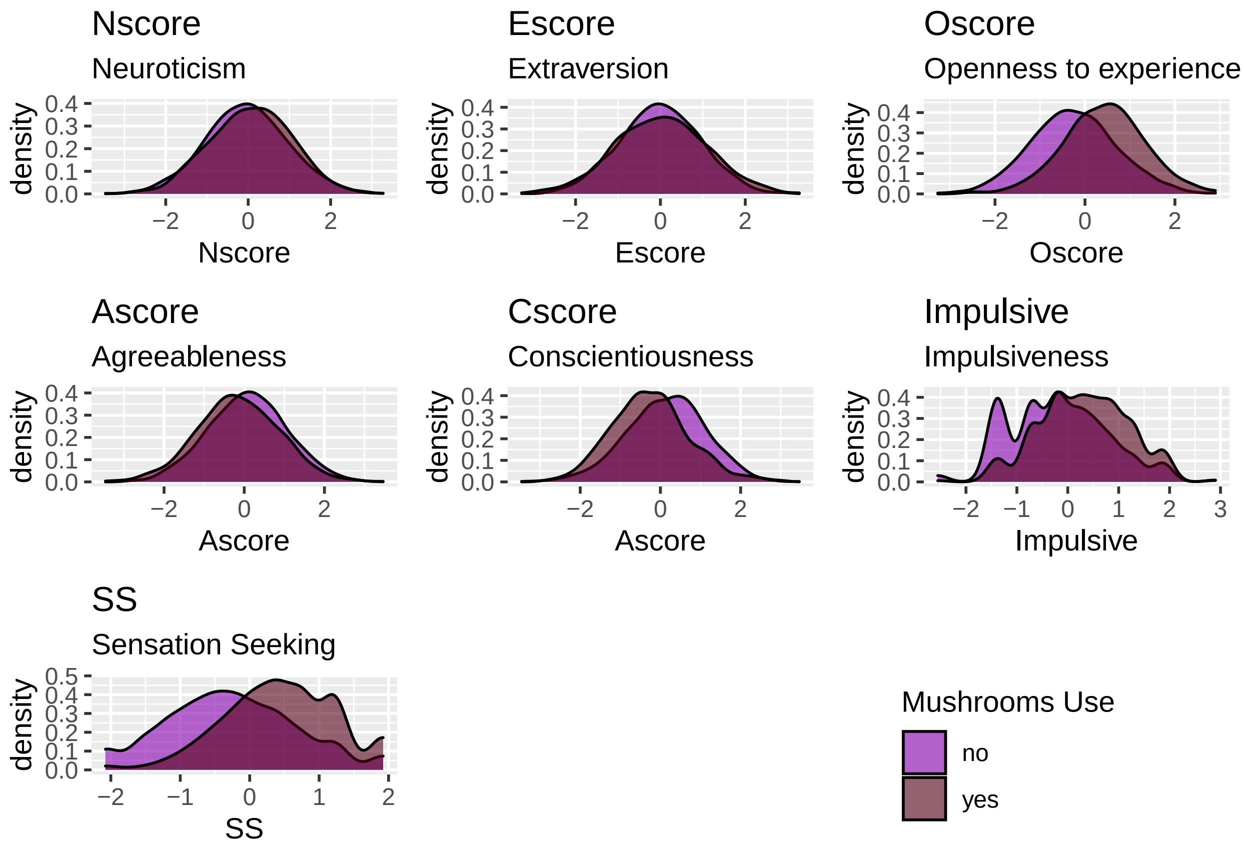
-Since the p-value is less than the significance level, gender is statistically significant.




Mushroom User by Education Level
count
1.00
0.75
0.50
0.25
0.00
Left school before 16 years
Left school at 16 years
Left school at 17 years
Left school at 18 years
Some college or university, no certificate or degree
University degree
Masters degree
Professional certificate/ diploma
Doctorate degree
Education Level
Mushrooms User
no
yes


Mushroom User by Age
count
1.00
0.75
0.50
0.25
0.00
18-24
25-34
35-44
45-54
55-64
65+
Age Group
Mushrooms User
no
yes


Mushroom User by Ethincity
count
1.00
0.75
0.50
0.25
0.00
Asian
Black
Mixed-Black/Asian
Mixed-White/Asian
Mixed-White/Black
Other
White
Ethnicity
Mushrooms User
no
yes




```
## # A tibble: 2 x 7
##   term        estimate std.error statistic  p.value conf.low conf.high
##   <chr>          <dbl>     <dbl>     <dbl>    <dbl>    <dbl>     <dbl>
## 1 (Intercept)    0.325    0.0757     -14.8 1.03e-49    0.280     0.377
## 2 GenderM        2.96     0.0999      10.9 1.46e-27    2.44      3.61

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

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```

```
## # A tibble: 6 x 7
##   term           estimate std.error statistic  p.value conf.low conf.high
##   <chr>             <dbl>     <dbl>     <dbl>    <dbl>    <dbl>     <dbl>
## 1 (Intercept) 1.33           0.0797    3.58   3.48e- 4   1.14       1.56
## 2 Age25-34    0.535          0.122    -5.12   3.07e- 7   0.421      0.679
## 3 Age35-44    0.205          0.152   -10.4    1.74e-25   0.151      0.275
## 4 Age45-54    0.125          0.185   -11.2    2.54e-29   0.0863     0.178
## 5 Age55-64    0.0806         0.360    -7.00   2.52e-12   0.0371     0.155
## 6 Age65+      0.000000131  343.       -0.0462 9.63e- 1  NA        140.
```

```
## # A tibble: 9 x 7
##   term                  estimate std.error statistic  p.value conf.low conf.high
##   <chr>                    <dbl>     <dbl>     <dbl>    <dbl>    <dbl>     <dbl>
## 1 (Intercept)              1.42     0.0903     3.89  9.94e- 5   1.19       1.70
## 2 EducationDoctorate d~    0.231    0.262     -5.60  2.19e- 8   0.136      0.380
## 3 EducationLeft school~    0.156    0.276     -6.73  1.72e-11   0.0886     0.263
## 4 EducationLeft school~    0.469    0.383     -1.97  4.84e- 2   0.216      0.985
## 5 EducationLeft school~    0.704    0.219     -1.60  1.09e- 1   0.457      1.08
## 6 EducationLeft school~    0.391    0.405     -2.32  2.03e- 2   0.170      0.848
## 7 EducationMasters deg~    0.202    0.169     -9.48  2.61e-21   0.144      0.279
## 8 EducationProfessiona~    0.262    0.164     -8.16  3.45e-16   0.189      0.360
## 9 EducationUniversity ~    0.317    0.134     -8.60  8.25e-18   0.243      0.411
```

```
## # A tibble: 7 x 7
##   term                  estimate std.error statistic  p.value conf.low conf.high
##   <chr>                    <dbl>     <dbl>     <dbl>    <dbl>    <dbl>     <dbl>
## 1 (Intercept)              1.96     0.0896     7.53   5.24e-14   1.65       2.34
## 2 CountryAustralia         0.509    0.287     -2.35   1.86e- 2   0.290      0.896
## 3 CountryCanada            0.572    0.233     -2.40   1.62e- 2   0.362      0.904
## 4 CountryNew Zealand       0.764    0.917     -0.293  7.69e- 1   0.126      5.84
## 5 CountryOther             0.625    0.206     -2.29   2.22e- 2   0.418      0.937
## 6 CountryRepublic of I~    0.218    0.496     -3.07   2.16e- 3   0.0763     0.554
## 7 CountryUK                0.105    0.122    -18.5    1.05e-76   0.0824     0.133
```

```
## # A tibble: 8 x 7
##   term         estimate std.error statistic  p.value conf.low conf.high
##   <chr>           <dbl>     <dbl>     <dbl>    <dbl>    <dbl>     <dbl>
## 1 (Intercept)    0.507    0.0552   -12.3    7.17e-35    0.454     0.564
## 2 Nscore         0.849    0.0629    -2.60   9.36e- 3    0.750     0.960
## 3 Oscore         1.89     0.0641     9.97   2.05e-23    1.67      2.15
## 4 Impulsive      1.03     0.0739     0.334  7.38e- 1    0.887     1.19
## 5 SS             1.87     0.0782     8.00   1.20e-15    1.61      2.18
## 6 Cscore         0.764    0.0638    -4.22   2.45e- 5    0.674     0.865
## 7 AScore         0.895    0.0574    -1.93   5.33e- 2    0.800     1.00
## 8 Escore         0.801    0.0650    -3.41   6.41e- 4    0.705     0.909
```

Results:

Discussion:

References: