

Final Report

due November 16, 2021 by 11:59 PM

G.I. Joe: Isa Rundell and Grace Vo

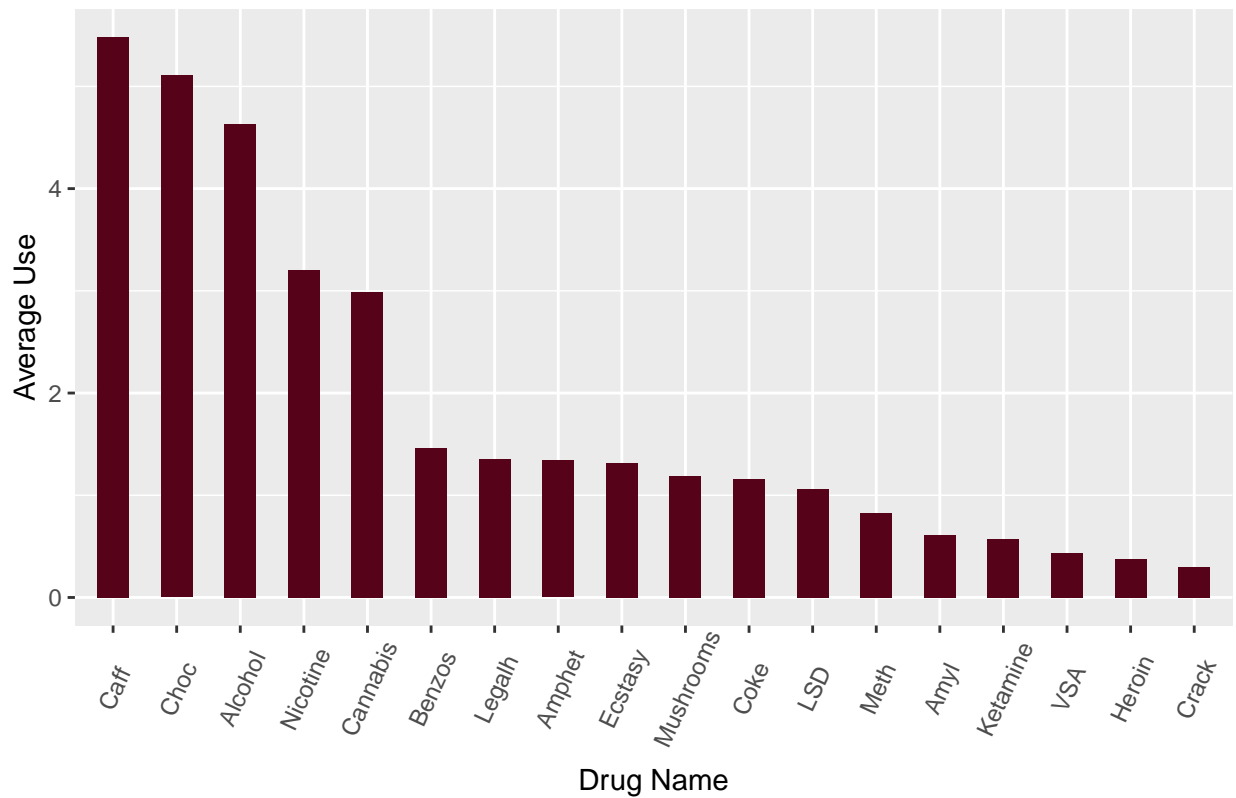
Abstract:

Background and Significance:

Methods: a) Data Collection and Variables

b) Exploratory Data Analysis

Average Drug Use by Drug



##	ID	Age	Gender	Education	Country	Ethnicity	Nscore	Escore	Oscore	AScore
## 1	2	1	1	8	5	6	-0.67825	1.93886	1.43533	0.76096
## 2	3	2	1	5	5	6	-0.46725	0.80523	-0.84732	-1.62090
## 3	4	0	0	7	5	6	-0.14882	-0.80615	-0.01928	0.59042
## 4	5	2	0	8	5	6	0.73545	-1.63340	-0.45174	-0.30172
## 5	6	5	0	3	1	6	-0.67825	-0.30033	-1.55521	2.03972
## 6	7	3	1	7	6	6	-0.46725	-1.09207	-0.45174	-0.30172
##	Cscore Impulsive			SS Mushrooms						

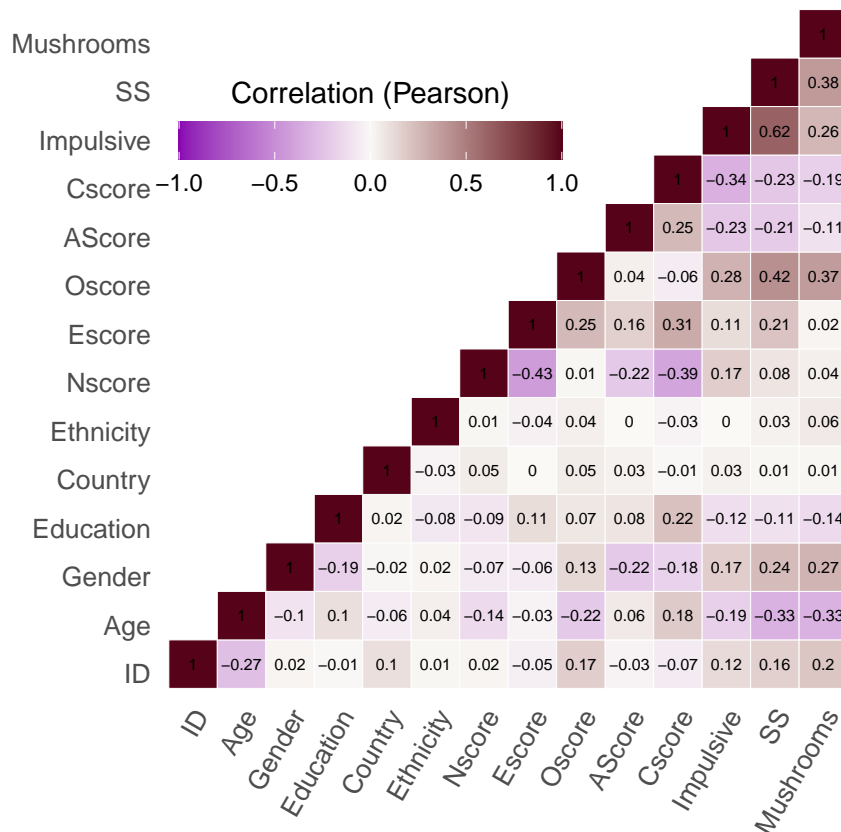
```
## 1 -0.14277 -0.71126 -0.21575 0
## 2 -1.01450 -1.37983 0.40148 1
## 3 0.58489 -1.37983 -1.18084 0
## 4 1.30612 -0.21712 -0.21575 2
## 5 1.63088 -1.37983 -1.54858 0
## 6 0.93949 -0.21712 0.07987 0

##      ID   Age Gender Education Country Ethnicity Nscore Escore Oscore
## ID      1.00 -0.27  0.02    -0.01   0.10     0.01  0.02  -0.05  0.17
## Age     -0.27  1.00 -0.10     0.10  -0.06     0.04 -0.14 -0.03 -0.22
## Gender   0.02 -0.10  1.00    -0.19  -0.02     0.02 -0.07 -0.06  0.13
## Education -0.01  0.10 -0.19     1.00   0.02    -0.08 -0.09  0.11  0.07
## Country  0.10 -0.06 -0.02     0.02   1.00    -0.03  0.05  0.00  0.05
## Ethnicity 0.01  0.04  0.02    -0.08  -0.03     1.00  0.01 -0.04  0.04

##      AScore Cscore Impulsive  SS Mushrooms
## ID      -0.03 -0.07     0.12  0.16     0.20
## Age       0.06  0.18    -0.19 -0.33    -0.33
## Gender    -0.22 -0.18     0.17  0.24     0.27
## Education  0.08  0.22    -0.12 -0.11    -0.14
## Country   0.03 -0.01     0.03  0.01     0.01
## Ethnicity  0.00 -0.03     0.00  0.03     0.06

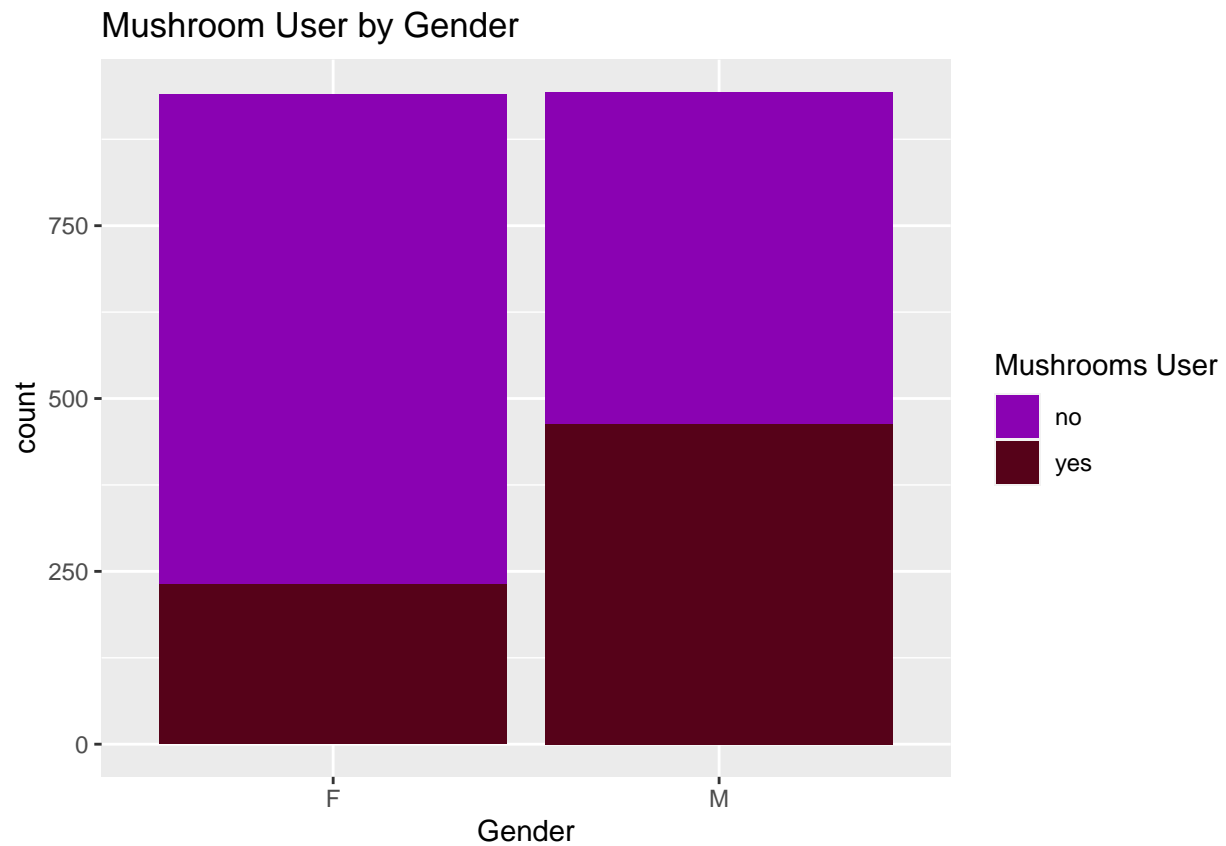
##
## Attaching package: 'reshape2'

## The following object is masked from 'package:tidyr':
##
##      smiths
```



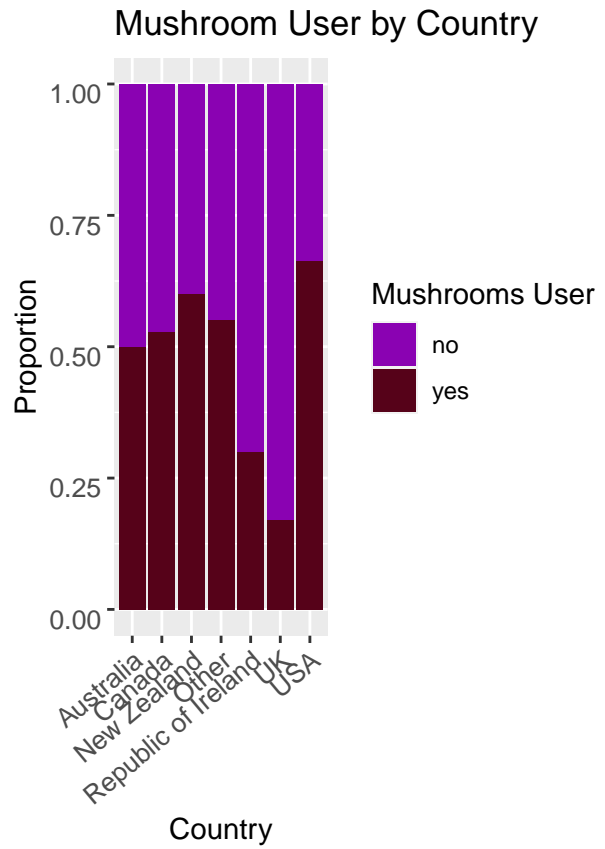
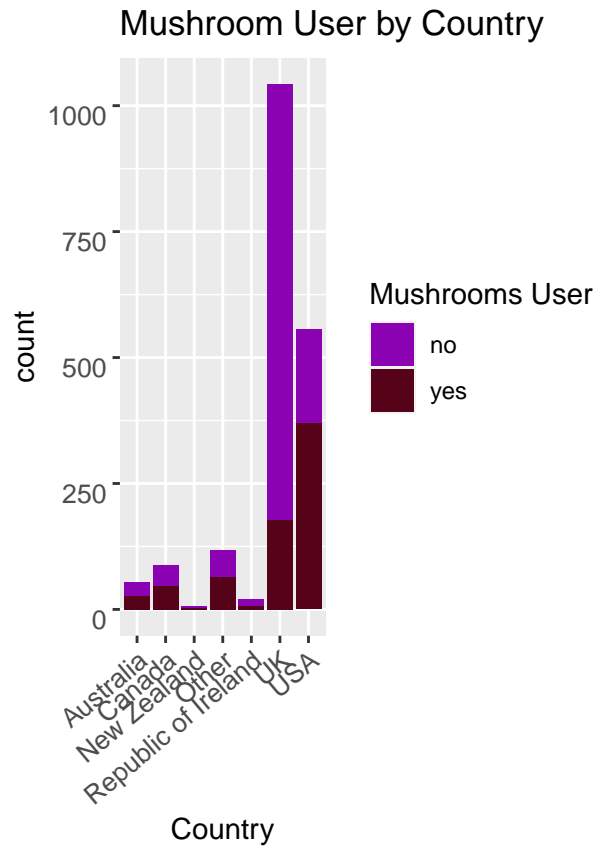
```
##      diff      drug
## 1   349  Benzos_User
## 2   361 LegalHighs_User
## 3   383  Ecstasy_User
## 4   497 Mushrooms_User
## 5   511  Cocaine_User
## 6   529 Amphetamine_User
```

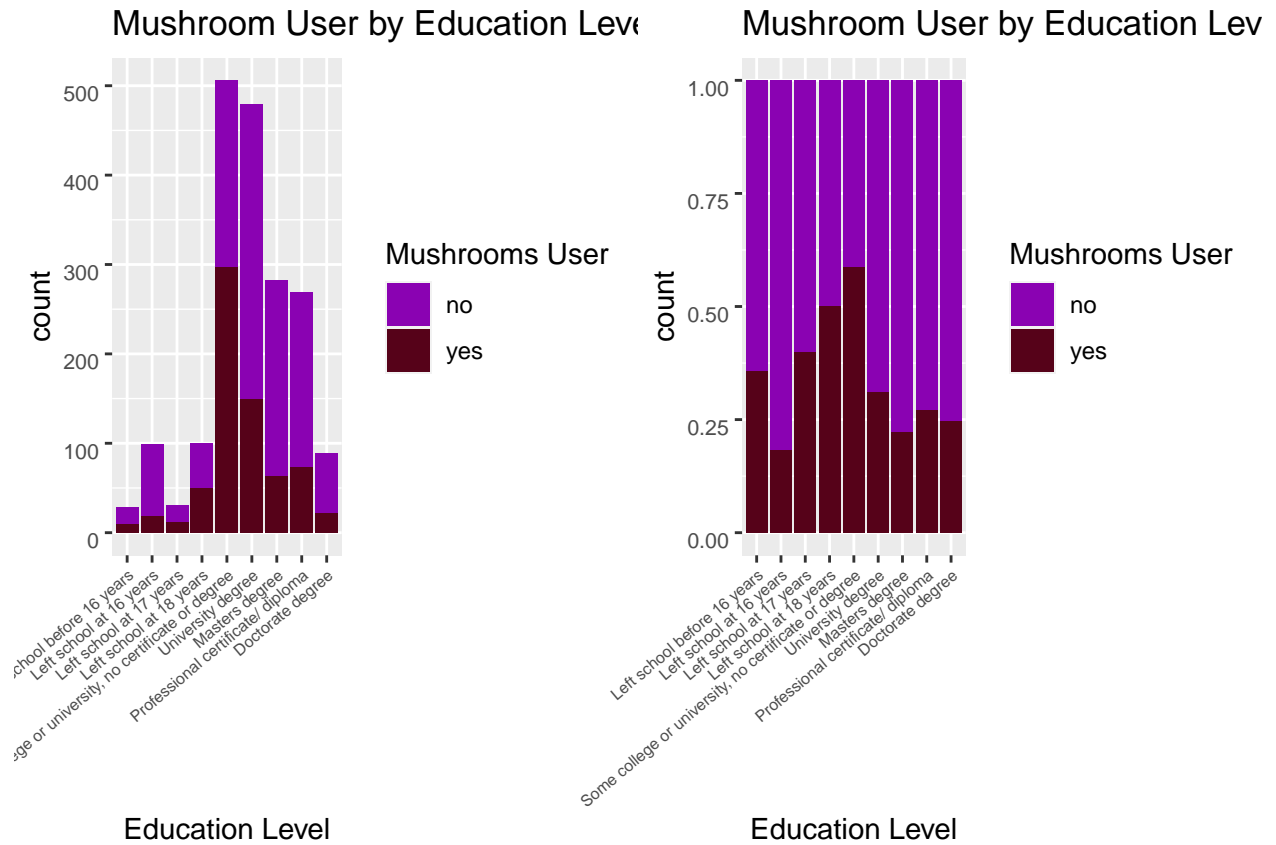
c) Analytical Methods

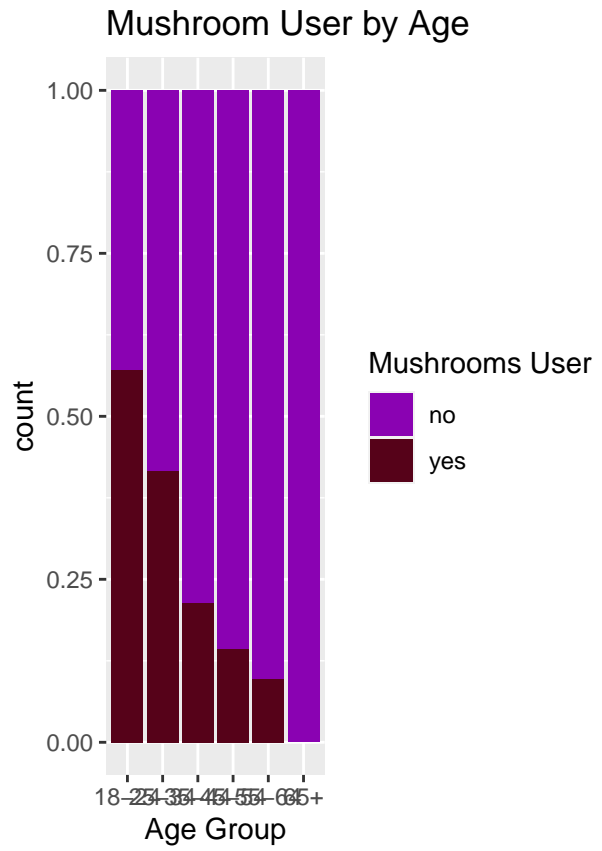
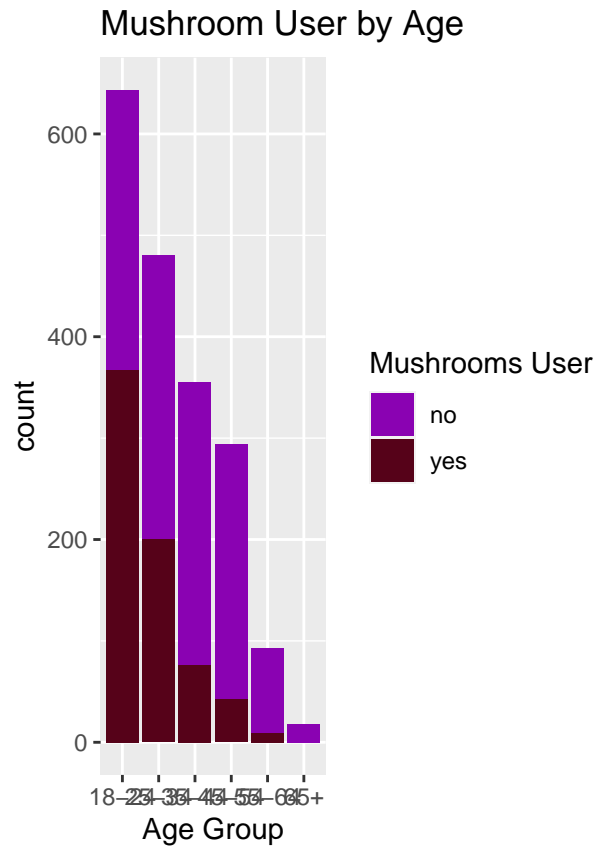


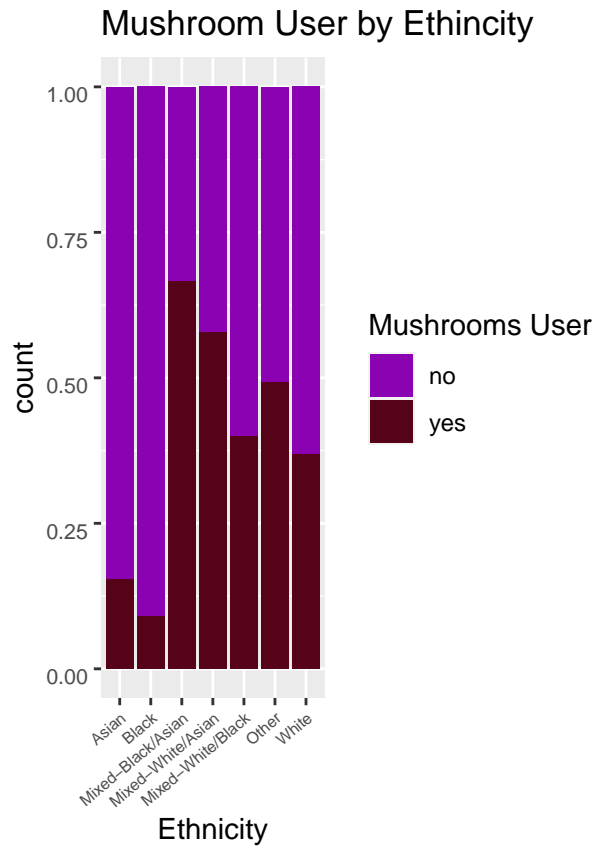
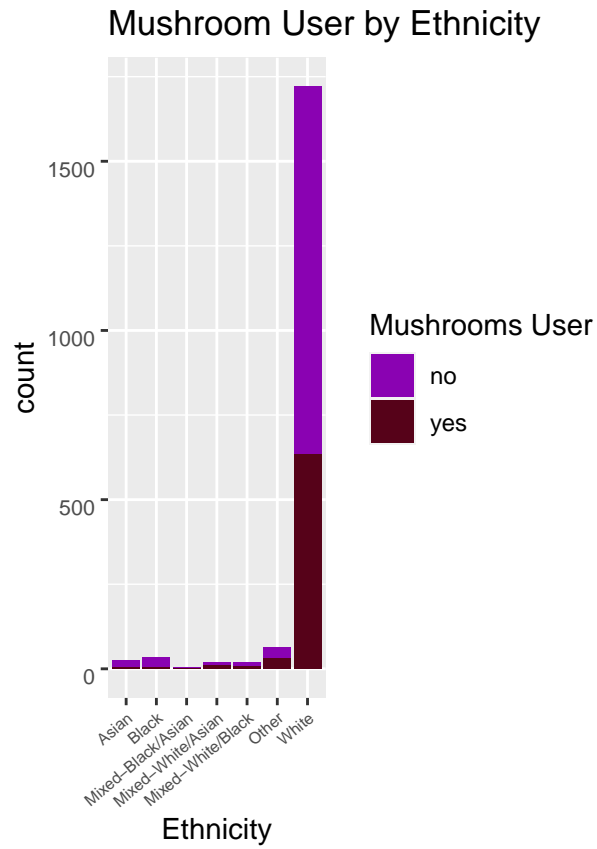
```
##
## Fisher's Exact Test for Count Data
##
## data: drug_clean_2$Gender and drug_clean_2$Mushrooms_User
## p-value < 2.2e-16
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  2.426426 3.624594
## sample estimates:
## odds ratio
##  2.962888
```

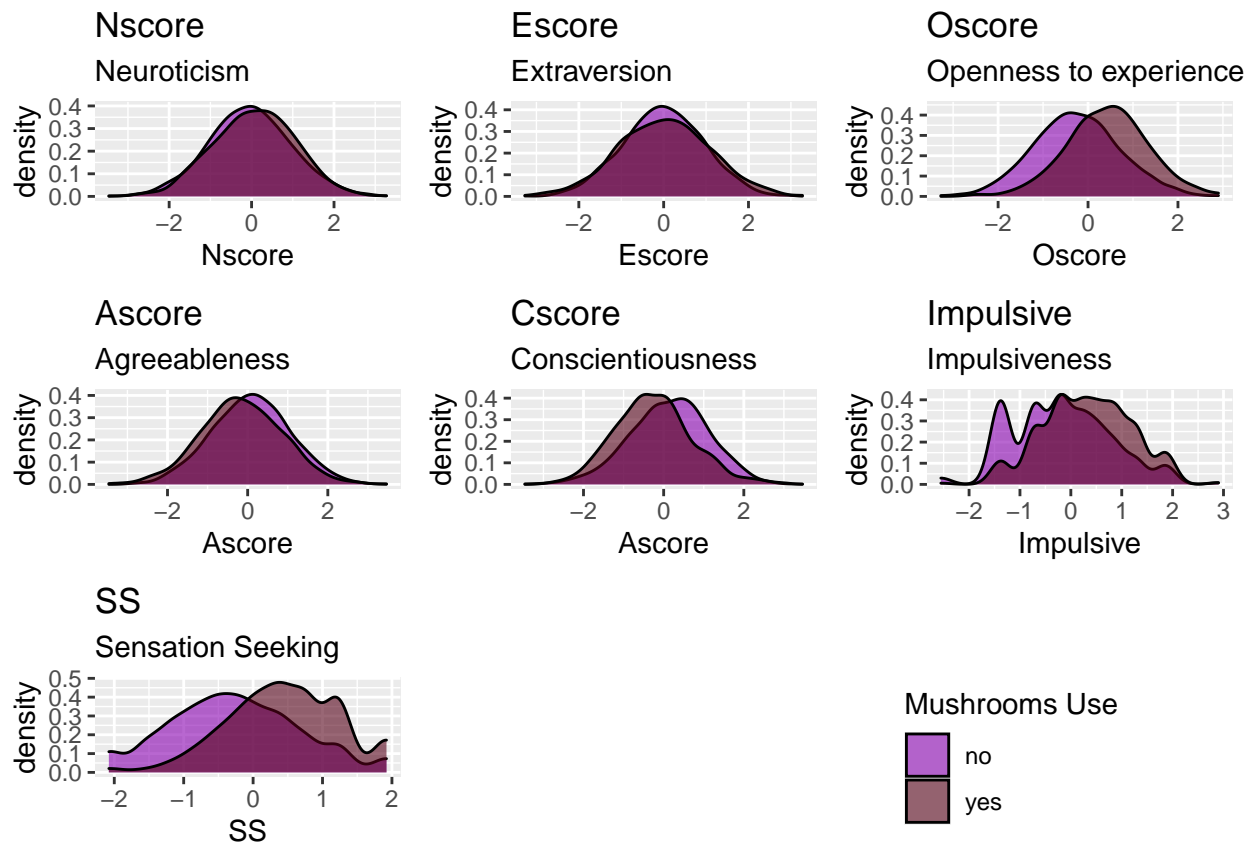
-Since the p-value is less than the significance level, gender is statistically significant.











```
## # A tibble: 22 x 7
```

##	term	estimate	std.error	statistic	p.value	conf.low	conf.high
##	<chr>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>
##	1 (Intercept)	0.610	0.132	-3.76	1.71e- 4	0.471	0.789
##	2 GenderM	1.35	0.112	2.66	7.84e- 3	1.08	1.68
##	3 Age25-34	1.46	0.145	2.62	8.83e- 3	1.10	1.94
##	4 Age35-44	1.13	0.162	0.758	4.48e- 1	0.822	1.56
##	5 Age45-54	1.18	0.175	0.924	3.56e- 1	0.834	1.66
##	6 Age55-64	0.674	0.278	-1.42	1.56e- 1	0.384	1.15
##	7 Age65+	0.702	0.633	-0.560	5.76e- 1	0.177	2.23
##	8 EducationDoctorate ~	0.816	0.269	-0.755	4.50e- 1	0.479	1.38
##	9 EducationLeft schoo~	0.972	0.254	-0.110	9.12e- 1	0.589	1.60
##	10 EducationLeft schoo~	0.960	0.408	-0.100	9.20e- 1	0.429	2.15
##	11 EducationLeft schoo~	1.02	0.239	0.0865	9.31e- 1	0.639	1.63
##	12 EducationLeft schoo~	2.49	0.446	2.05	4.04e- 2	1.05	6.12
##	13 EducationMasters de~	0.574	0.183	-3.04	2.34e- 3	0.400	0.819
##	14 EducationProfession~	0.725	0.181	-1.78	7.58e- 2	0.507	1.03
##	15 EducationUniversity~	0.701	0.150	-2.37	1.79e- 2	0.522	0.940
##	16 Nscore	1.46	0.0634	5.97	2.35e- 9	1.29	1.66
##	17 Oscore	1.49	0.0611	6.49	8.48e-11	1.32	1.68
##	18 Impulsive	1.07	0.0714	0.989	3.22e- 1	0.933	1.23
##	19 SS	1.30	0.0761	3.49	4.89e- 4	1.12	1.51
##	20 Cscore	0.929	0.0621	-1.19	2.35e- 1	0.822	1.05
##	21 AScore	0.888	0.0562	-2.11	3.46e- 2	0.795	0.991
##	22 Escore	0.899	0.0630	-1.69	9.18e- 2	0.794	1.02

```
## # 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)	0.622	0.0540	-8.79	1.53e-18	0.560	0.691
## 2	Nscore	1.42	0.0607	5.74	9.26e- 9	1.26	1.60
## 3	Oscore	1.47	0.0589	6.58	4.84e-11	1.31	1.65
## 4	Impulsive	1.06	0.0702	0.842	4.00e- 1	0.925	1.22
## 5	SS	1.40	0.0728	4.60	4.24e- 6	1.21	1.61
## 6	Cscore	0.880	0.0601	-2.13	3.28e- 2	0.782	0.989
## 7	AScore	0.865	0.0549	-2.63	8.42e- 3	0.777	0.963
## 8	Escore	0.870	0.0621	-2.24	2.53e- 2	0.770	0.983
## 9	Oscore:SS	1.14	0.0531	2.46	1.38e- 2	1.03	1.26

Results:

Discussion:

References: