exercise_4_code+output.R

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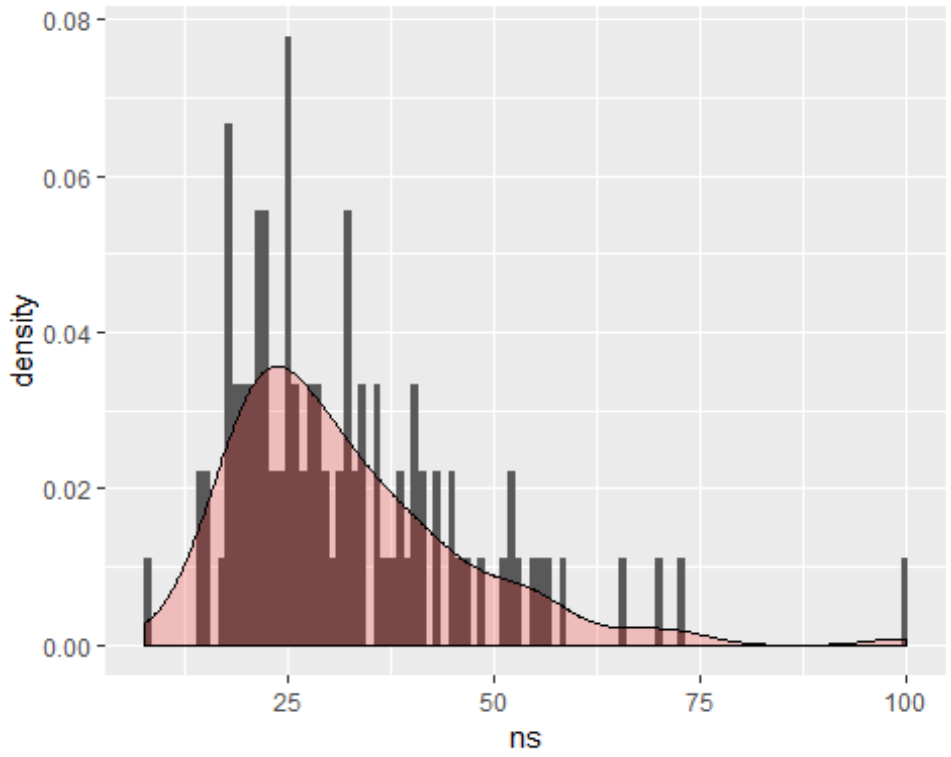
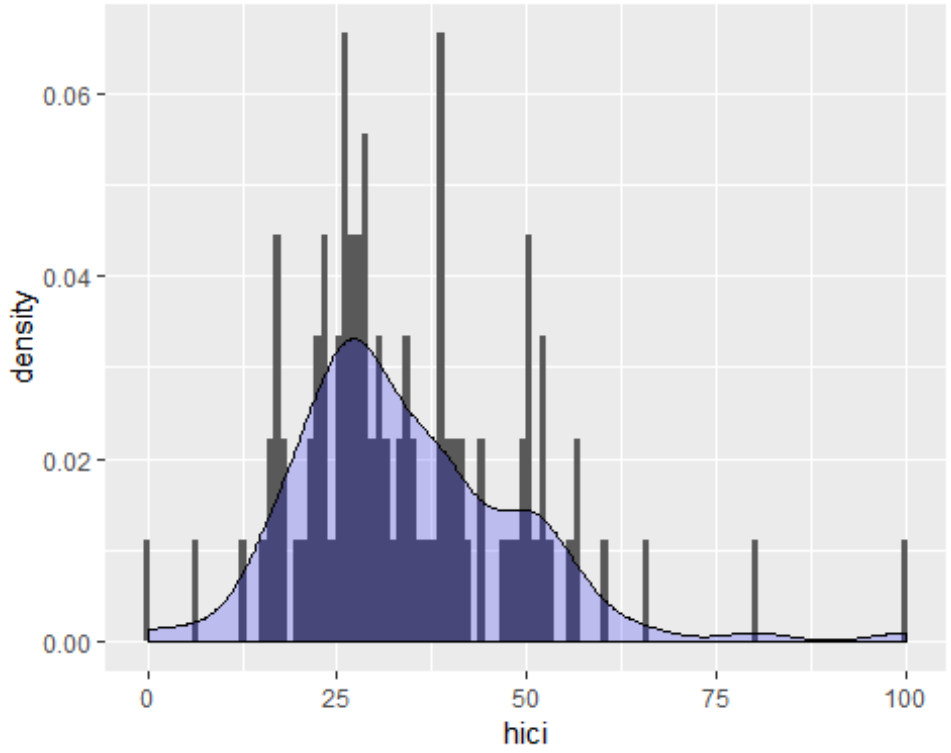
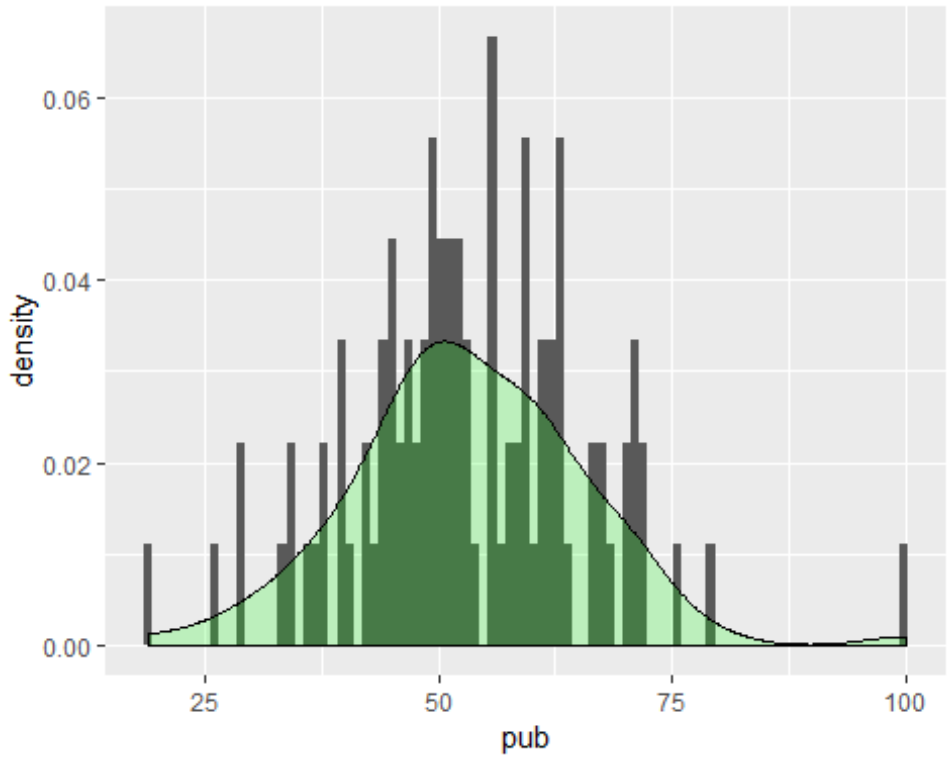
```
library(tidyverse)

## -- Attaching packages ---------------------------------------- tidyverse
1.2.1 --

## v ggplot2 3.1.0     v purrr   0.3.0
## v tibble  2.0.1     v dplyr   0.7.8
## v tidyr   0.8.2     v stringr 1.3.1
## v readr   1.3.1     v forcats 0.3.0

## -- Conflicts ------------------------------------------------
tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()

library(tibble)
library(ggplot2)
library(dplyr)

shangai <- read.csv("shanghaiData.csv")
shangaidf <- data.frame(shangai)

names(shangaidf)

##  [1] "world_rank"      "university_name" "national_rank"
##  [4] "total_score"     "alumni"          "award"
##  [7] "hici"            "ns"              "pub"
## [10] "pcp"             "year"

#To show the N & S scores based on the number of papers published in Nature
#and science...
#using the top 100 univerities in the year 2015

shangai2015 <- shangaidf %>% filter(year == "2015")
shangaihead <- head(shangai2015,100)

ggplot(shangaihead, aes(x=ns)) + geom_histogram(aes(y=..density..), binwidth
= .9) +
  geom_density(alpha=.2, fill = "red")
```



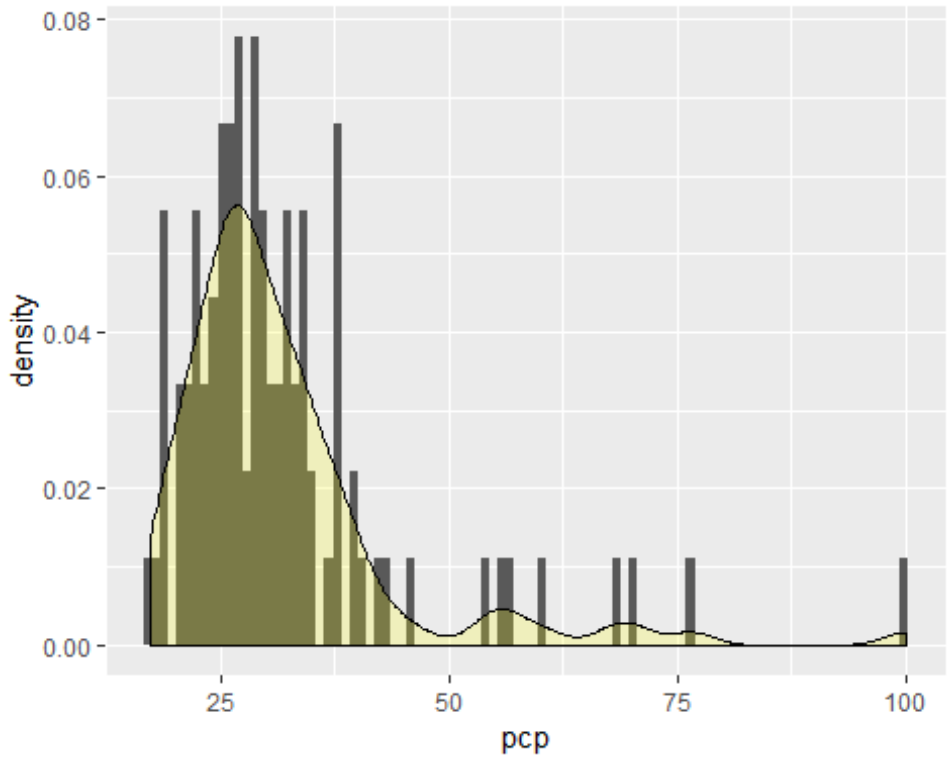

```
#To show the hici scores based on the number of Highly Cited Researchers
selected
#by Thomson Reuters
#using the top 100 univerities in the year 2015

ggplot(shangaihead, aes(x=hici)) + geom_histogram(aes(y=..density..),
binwidth = .9) +
  geom_density(alpha=.2, fill = "blue")
```




```
#To show the pub scores based on total number of papers indexed in the
Science
#Citation Index-Expanded and Social Science Citation Index
#using the top 100 univerities from the year 2015

ggplot(shangaihead, aes(x=pub)) + geom_histogram(aes(y=..density..), binwidth
= .9) +
  geom_density(alpha=.2, fill = "green")
```




```
#To show the pcp scores the weighted scores of the above five indicators
#divided by the number of full time academic staff
#using the top 100 univerities from the year 2015

ggplot(shangaihead, aes(x=pcp)) + geom_histogram(aes(y=..density..), binwidth
= .9) +
  geom_density(alpha=.2, fill = "yellow")
```


0.08
0.06
0.04
0.02
0.00
density
25
50
75
100
pcp