Stat101 Homework Report for Section C and Unit 2

Overview

The 3 homework outcome files are Topico6.C.csv, Topico7.C.csv, Topico8.C.csv.

There are 50 students in Section C submitting their answers. 50 of them did all the homeworks. Since different homeworks have different full scores, the percentages correct are used to compare among homeworks. The average correct percents for the 3 homeworks are 82, 88, 70, respectively. Figure 1 compares the histograms of those homeworks. Table 1 and Figure 2 display the basic summaries of the scores.

| | Mean | Std.dev | Min | Median | Max |
|---------|-------|---------|-------|--------|--------|
| Topico6 | 81.52 | 21.71 | 0.00 | 90.00 | 100.00 |
| Topico7 | 88.48 | 11.81 | 36.00 | 92.00 | 100.00 |
| Topico8 | 69.91 | 20.96 | 9.09 | 72.73 | 100.00 |

Table 1: Summary statistics for correct percentage. Topico7 has the highest mean correct percentage, while Topico8 has the lowest. Topico6 has the largest standard deviation, and Topico7 has the smallest.

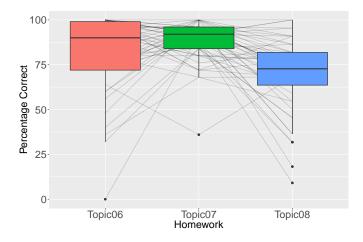


Figure 2: Side-by-side boxplots of the percentages correct by students homeworks. Topico7 has the highest median, while Topico8 has the lowest median.

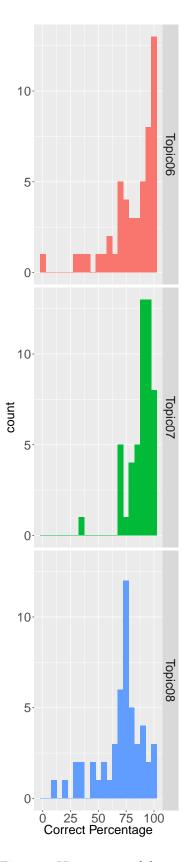


Figure 1: Histograms of the percentages correct by students homeworks.

Students

Figure 3 and Table 2 give the percentage scores of each homework of all homeworks for every student in this section. Table 2 also provides the mean percentages by student. The students are sorted by their average percentage score of 3 homeworks. Table 3 lists the students who were in the lower 20% of the class.

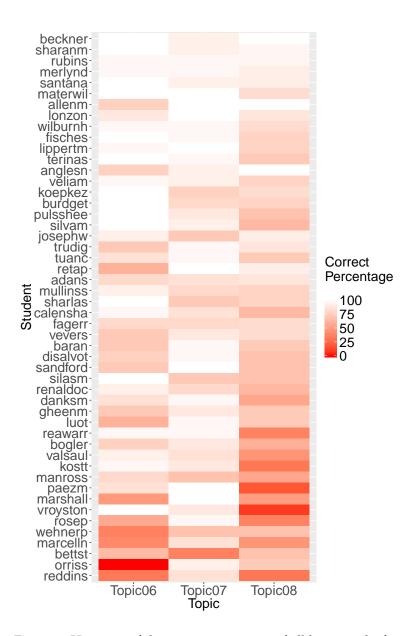


Figure 3: Heatmap of the percentage scores of all homeworks for students in the section. The grey areas are the missing values.

| | T | T . | T 0 | A C (D) |
|----------|---------|---------|---------|-----------|
| | Topico6 | Topico7 | Topico8 | AvgCrtPct |
| beckner | 100.00 | 92.00 | 100.00 | 97.33 |
| sharanm | 100.00 | 92.00 | 95.45 | 95.82 |
| rubins | 96.00 | 96.00 | 95.45 | 95.82 |
| merlynd | 96.00 | 96.00 | 90.91 | 94.30 |
| santana | 100.00 | 92.00 | 90.91 | 94.30 |
| materwil | 100.00 | 100.00 | 81.82 | 93.94 |
| allenm | 76.00 | 100.00 | 100.00 | 92.00 |
| lonzon | 88.00 | 100.00 | 86.36 | 91.45 |
| wilburnh | 96.00 | 96.00 | 81.82 | 91.27 |
| fisches | 100.00 | 96.00 | 77.27 | 91.09 |
| lippertm | 96.00 | 100.00 | 77.27 | 91.09 |
| terinas | 100.00 | 96.00 | 72.73 | 89.58 |
| anglesn | 76.00 | 92.00 | 100.00 | 89.33 |
| veliam | 96.00 | 92.00 | 77.27 | 88.42 |
| koepkez | 100.00 | 76.00 | 81.82 | 85.94 |
| burdget | 100.00 | 80.00 | 77.27 | 85.76 |
| pulsshee | 100.00 | 88.00 | 68.18 | 85.39 |
| silvam | 100.00 | 92.00 | 63.64 | 85.21 |
| josephw | 92.00 | 72.00 | 90.91 | 84.97 |
| trudig | 72.00 | 96.00 | 86.36 | 84.79 |
| tuanc | 84.00 | 96.00 | 72.73 | 84.24 |
| retap | 60.00 | 100.00 | 90.91 | 83.64 |
| adans | 80.00 | 84.00 | 86.36 | 83.45 |
| mullinss | 92.00 | 80.00 | 77.27 | 83.09 |
| sharlas | 100.00 | 72.00 | 77.27 | 83.09 |
| calensha | 96.00 | 84.00 | 63.64 | 81.21 |
| fagerr | 80.00 | 80.00 | 81.82 | 80.61 |
| vevers | 72.00 | 88.00 | 81.82 | 80.61 |
| baran | 72.00 | 96.00 | 72.73 | 80.24 |
| disalvot | 76.00 | 96.00 | 68.18 | 80.06 |
| sandford | 72.00 | 100.00 | 68.18 | 80.06 |
| silasm | 100.00 | 72.00 | 68.18 | 80.06 |
| renaldoc | 92.00 | 80.00 | 63.64 | 78.55 |
| danksm | 84.00 | 96.00 | 54.55 | 78.18 |
| gheenm | 72.00 | 88.00 | 72.73 | 77.58 |
| luot | 60.00 | 96.00 | 72.73 | 76.24 |
| reawarr | 96.00 | 96.00 | 36.36 | 76.12 |
| bogler | 76.00 | 88.00 | 59.09 | 74.36 |
| valsaul | 92.00 | 84.00 | 45.45 | 73.82 |
| kostt | 96.00 | 88.00 | 31.82 | 71.94 |
| manross | 80.00 | 68.00 | 54·55 | 67.52 |
| paezm | 84.00 | 100.00 | 18.18 | 67.39 |
| 1 | • | | | , ,, |

| marshall | 48.00 | 100.00 | 50.00 | 66.00 |
|----------|--------|--------|-------|-------|
| vroyston | 100.00 | 88.00 | 9.09 | 65.70 |
| rosep | 56.00 | 96.00 | 36.36 | 62.79 |
| wehnerp | 36.00 | 68.00 | 68.18 | 57.39 |
| marcelln | 40.00 | 84.00 | 45.45 | 56.48 |
| bettst | 64.00 | 36.00 | 68.18 | 56.06 |
| orriss | 0.00 | 92.00 | 72.73 | 54.91 |
| reddins | 32.00 | 84.00 | 31.82 | 49.27 |

Table 2: Percentage scores of all homeworks for the students. 22% of the students have the average correct percentage greater than 90%, and 10% of the students have their average correct percentage below 60%.

| - | Topico6 | Topico7 | Topico8 |
|----------|---------|---------|---------|
| koepkez | | Χ | |
| josephw | | X | |
| retap | X | | |
| sharlas | | X | |
| silasm | | X | |
| luot | X | | |
| reawarr | | | X |
| valsaul | | | X |
| kostt | | | X |
| manross | | X | |
| paezm | | | X |
| marshall | X | | X |
| vroyston | | | X |
| rosep | X | | X |
| wehnerp | X | X | |
| marcelln | X | | X |
| bettst | X | X | |
| orriss | X | | |
| reddins | X | | X |

Table 3: Students whose scores were under 20% of the class.

Missing Data

Figure 4 shows the summary of missing homeworks from the students. Table 4 lists the students who missed at least one homework.

Times.Missing

Table 4: Students with missing homeworks.

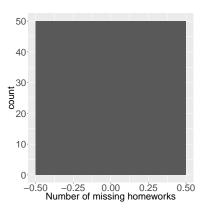


Figure 4: Histogram of the missing homeworks.

Acknowledgement

This report is generated by Xiaoyue Cheng, Dianne Cook, Lindsay Rutter, and Amy Froelich, using R-3.1.2 with package knitr, xtable and ggplot2.