

Module 3: Univariate displays

(The attached PDF file has better formatting.)

Homework assignment: stem and leaf display

A stem and leaf display for assault rates in the fifty U.S. states appears below. The assault rates range from 4.5% to 33.7%.

```
4 | 568
5 | 367
6 |
7 | 2
8 | 136
9 |
10 | 2699
11 | 035
12 | 000
13 |
14 | 59
15 | 1699
16 | 1
17 | 48
18 | 8
19 | 0
20 | 14
21 | 1
22 |
23 | 68
24 | 99
25 | 2459
26 | 3
27 | 69
28 | 5
29 | 4
30 | 0
31 |
32 |
33 | 57
```

- What is the median assault rate? There are 50 states, so average two points.
- What is the lower hinge (the 25th percentile)?
- What is the upper hinge (the 75th percentile)?
- What is the value of $(H_U - \text{Median}) / (\text{Median} - H_L)$, where H_U is the upper hinge and H_L is the lower hinge?

E. This ratio indicates the skewness of the distribution. Is this distribution positively skewed or negatively skewed?