PLSC 308: Introduction to Political Research

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2016 POLITICAL SCIENCE CAREER WORKSHOP

- 15-20 Political Science alumni will be present to share their experience and strategic planning expertise to help you develop and advance your career goals.

- You will sit down one on one with alumni whose careers match their interests for 20 minute sessions to discuss your career goals and identify strategies for achieving them.

- The event will be held between 1:00-3:30pm at the Bank of America Career Services Building on Thursday, April 14

- Must register with Aimée Grugan by April 4 to get on the schedule. arp20@psu.edu

- To maximize opportunities to network with alumni, students are invited to attend the Political Science Student-Alumni banquet at the Penn State Conference Center Hotel after the workshop at 5pm. Tickets for the banquet are $15 and can be purchased from Aimée Grugan (219 Pond Lab), or members of Pi Sigma Alpha.

Univariate Analyses

Done mostly to *describe* the data.

- "Data reduction"

- Necessarily involves some loss of information

- For this reason, graphics $>$ statistics...

Univariate Statistics: Central Tendency

- (Arithmetic) Mean: $\bar{X} = \frac{\sum_{i=1}^{N} X_i}{N}$

- Median: $\check{X} =$ "middle observation" of X

- Mode: $\text{mode}(X) =$ most commonly occurring value of X

Univariate Statistics: Variation

- Range: $\text{Range}(X) = \max(X) - \min(X)$

- Inter-Quartile Range:
  $\text{IQR}(X) = 75\text{th percentile}(X) - 25\text{th percentile}(X)$

- Variance: $\sigma^2 = \frac{1}{N-1} \sum_{i=1}^{N} (X_i - \bar{X})^2$

- Std. Deviation: $\sigma = \sqrt{\frac{1}{N-1} \sum_{i=1}^{N} (X_i - \bar{X})^2}$

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- Inter-Quartile Range:
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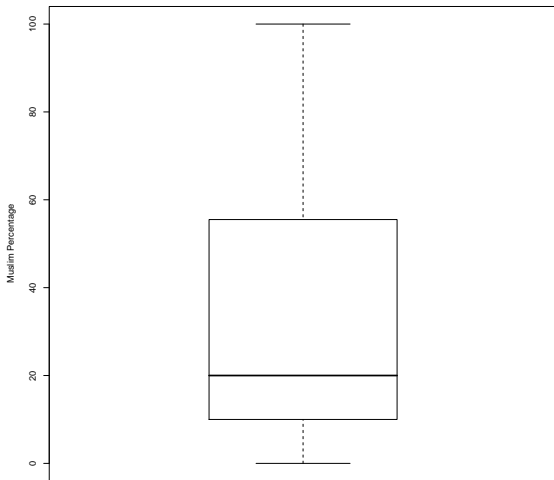- Std. Deviation: $\sigma = \sqrt{\frac{1}{N-1} \sum_{i=1}^{N} (X_i - \bar{X})^2}$

Example: Africa 2001

Muslim Percentage of the Population

- Central tendency:
    - · Mean = 35.96
    - · Median = 20.00
    - • Mode = {0,10,20}

- Variability:
    - · Range = 100
    - · IQR = 50 [10,60]
    - · Variance = 1195.76
    - · Std. Deviation = 34.58

Univariate Description: Dotplots
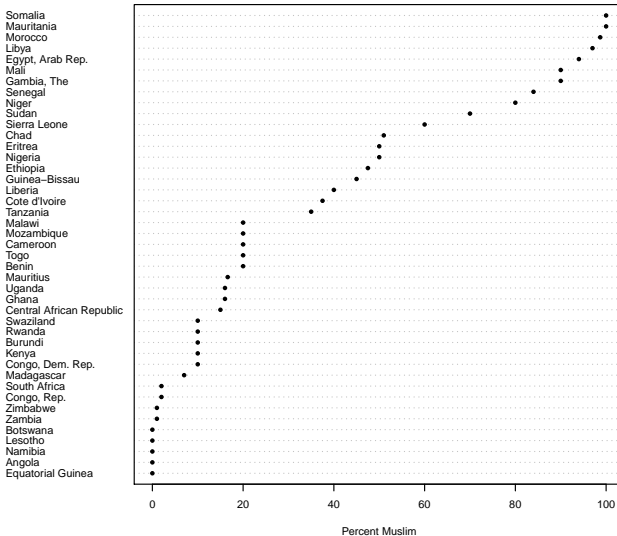
Univariate Description: Boxplots

Univariate Description: Histograms