

Assignment 6

Due Wednesday by 11:59pm **Points** 2 **Submitting** a file upload

Available Feb 14 at 12am - Feb 22 at 11:59pm 9 days



Assignment 6

Shortcut to [Module 6](#)

Probability of texting.

- You are asked to compute the probability that the driver of a car is texting at a specific intersection.
 - Nationally the cumulative probability that a driver is texting is:
 - > $P = 0.5$, at $x = 0.1$
 - > $P = 0.75$ at $x = 0.3$
 - You observe cars at a location three times and note the number of texting drivers:
 1. 2 texting out of 20 drivers
 2. 4 texting out of 20 drivers
 3. 1 texting out of 20 drivers
- > **Given these data**
- Compute the Beta prior, and report the coefficients
 - Plot the prior, likelihood and posterior three times as you update your belief based on collecting more data
 - Simulate the final posterior distribution and do the following:
 - > Plot the posterior with the 90% HDI shown
 - > Report the upper and lower limits of the 90% HDI
 - > Of the next hundred drivers what are the number of texting drivers in the 90% HDI?
 - > Are the drivers in this area better or worse than the national figures indicate?

You should submit:

- > One R-script
 - Follow good coding practice; minimize cut and paste
 - Include comments
- > A clear report, **stating your conclusions up-front** and supporting the conclusions with evidence in the form of charts and numeric tables.

To submit your assignment:

1. Use the "Submit Assignment" link located on the top right corner.
2. Click "Choose file" button to find and select your saved report.
3. Press the "Submit Assignment" button to turn in your assignment.