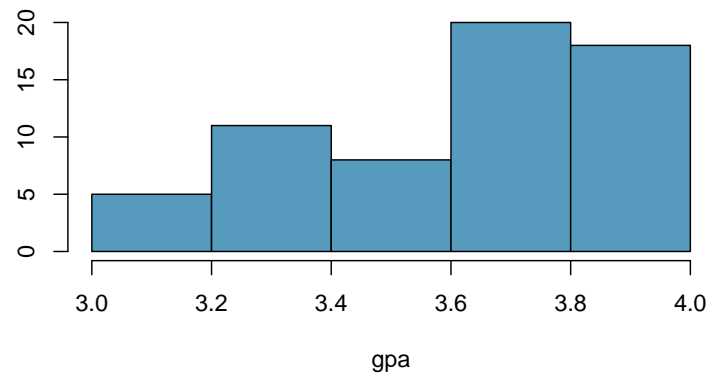


Application exercise:

3.2 Hypothesis testing for a single mean

GPA at Duke

In 2001 the average GPA of students at Duke University was 3.37. This semester we surveyed you, and 63 students responded to the question on GPA. The mean was 3.58, and the standard deviation 0.53. A histogram of the data is shown below.



Assuming that this sample is random and representative of all Duke students (bit of a leap of faith? you can discuss that when checking the conditions), do these data provide convincing evidence that the average GPA of Duke students has changed over the last decade?

Make sure to check conditions, note any assumptions you make, and show all your work.