Tutorial 3

Solutions to manually graded questions

Question 3.5
{points: 1}

Using the results in `facebook_SLR_results`, write a the correct interpretation of the estimated slope

Points: 1 ID: cell-96c286a1023992ca Manually graded answer

BEGIN SOLUTION

Holding the rest of the inputs constant, the expected total engagement percentage increases by 1.03% per 1% increase of the page engagement percentage.

or

A 1% increase of the page engagement percentage is associated with a 1.03% increase in the total engagement percentage.

Question 4.2
{points: 1}

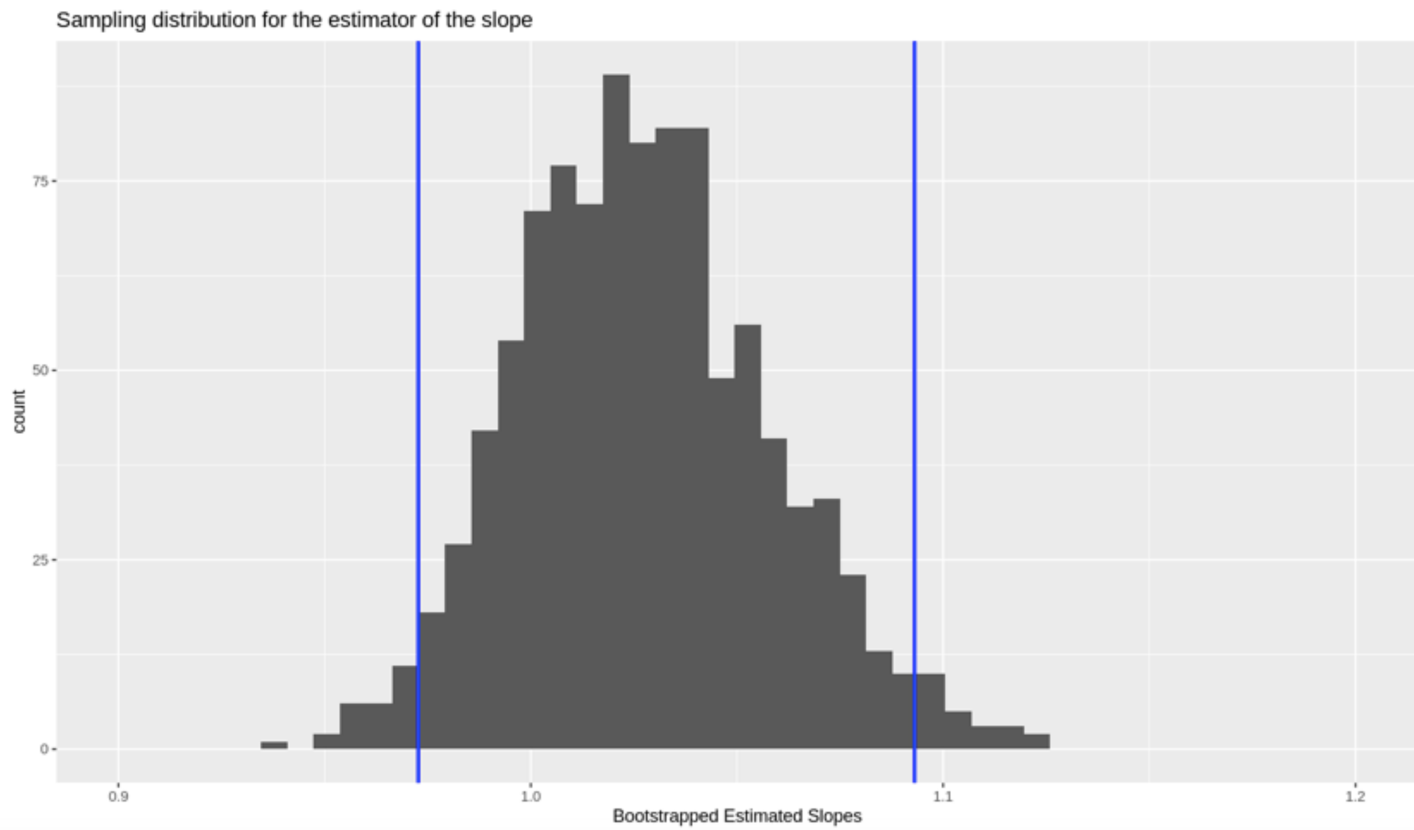
Using `facebook_SLR_results`, provide a correct intepretation of the 95% CI for `page_engagement_percentage`.

Points: 1 ID: cell-f20007eb5aa52e59 Manually graded answer

BEGIN SOLUTION

With 95% confidence, we expect an average increase in the total engagement percentage between 0.98% and 1.07% for every 1% increase in page engagement percentage.

```r
### BEGIN SOLUTION
slope_sampling_dist_boot_limits <- slope_sampling_dist_boot +
    geom_vline(aes(xintercept = quantile(boot_slope,0.025)),col='blue',size=1)+
    geom_vline(aes(xintercept = quantile(boot_slope,0.975)),col='blue',size=1)
### END SOLUTION
slope_sampling_dist_boot_limits
```



Question 4.7
{points: 1}

In one or two sentences explain how to use `lm_boot` generated in **Question 4.4** to approximate the sampling distribution of the estimator of the intercept.

Points: 1 ID: cell-72593ed4ef54b37f Manually graded answer

BEGIN SOLUTION

`lm_boot` contains a list of estimated intercepts. The distribution of these can be used to approximate the sampling distribution of the estimator of the intercept.