

GB704 - Homework 4

Due : October 19

Problem 1 (15pts)

Download dataset data1D2D.xlsx from my webpage. With how much confidence can you reject the hypothesis that average spending among male customers is \$1,250?

Problem 2 (15pts)

You are planning to start selling a service to a market of 100,000 potential customers. That will be profitable provided over 5% of the potential market signs up. Offering the service to a random test sample of 1,000 of these customers leads to 55 sign-ups. Using a one-sided test and these data, can you reject the hypothesis that the sign-up rate in this market will be 5% or less with 95% confidence?

Problem 3 (20pts)

Using once again dataset data1D2D.xlsx:

1. Test the hypothesis that mean spending is the same for men and for women.
2. Consider the following spending categories: < 100 , $[100, 200)$, $[200, 300)$, $[300 - 400)$, ≥ 400 . Create a table that shows the number of observations in each of those spending categories for men and for women.
3. Use that table to perform a Chi2 test of the hypothesis that spending is independent of gender.