R project Details (E-4150)

DDL: Dec 7 11:59pm

Report:

* 1. Describe the data set
  2. Formulate a set of questions you want to investigate and solve the required problem
  3. Analyze the data and draw conclusion
  4. PDF Format

Advice:

(Take care about figures and write their comments, because the report example of the online is different from our project goal)

(Short is often better and avoid endless number of figures)

1. Data and R:
   1. Data from Yahoo, google and etc.
   2. Describe the data set like mean, variance, approximate normal, confidence level and regression for one population data or two population data
   3. Use log-returns for your stock market data (Data from Yahoo, google and etc.)
   4. Explore basic questions and creative questions you want to explore
   5. Use R code to solve your questions
   6. Document your codes and avoid repetition.

1. Web App
   1. Create a web App (Toturial: <http://shiny.rstudio.com/tutorial/>)
   2. Minimum requirements of the is web app:

2.2.1 Given one stock symbol, your code needs to be able to:

(1) Display histograms for your data by stock symbol.

(2) Display a normal probability plot to see if the data is approximately normal.

(3) Create (approximate) confidence intervals for the means and variances given a confidence level.

(4) Perform a regression of the log-return on time.

2.2.2 Given two stock symbols, your code needs to be able to:

(1) Test the equality of the two population means.

(2) Perform a regression of one log-return on the other.

2.3 Your web app needs to run in the Google cloud and needs to be publicly accessible.

(1) You will receive cloud credit of $150 per team.

(2) Your server needs to be online when you submit until your course grade is posted on SSOL.

(3) You will receive detailed instructions on how to get your app online through Piazza.

Advice:

All regression output needs to include intercept and slope estimates, a diagram of the data with the least-squares line, a graphical depiction of residuals, and R^2.

1. Analyze Data and Draw Conclusion

Submission Requirement:

(~ Submit all files on CourseWorks;

~ Only one person submit;

~ Ensure all members are listed in the “R project” Group in CourseWorks

~ Zip file should be named as UNI1\_UNI2\_UNI3.zip

~ File “projectApp.html ?)