

ECO274

Group project and presentation

The presentation is an excellent opportunity to showcase your talent and evaluate your skills in presenting a technical topic to a group of general audience.

The group presentation for this course is approximately a ten minutes presentation about the nitty gritty of data science, the prominence of data science in economics/business and industry's daily applications, and the popularity of open source statistical software such as R and Python, primarily used in data science. The presentation requires you to review a journal article, "Ten simple rules for teaching yourself R." You are encouraged to pull out the topics and issues we have covered in the class meeting, for example, data cleaning, data filtering, data visualization using ggplot2 when preparing your presentation. Any other innovative insights and output are also welcome!

How to start

Once a group is formed, the group members should come together and download the paper titled "Ten simple rules for teaching yourself R" from the GitHub page (<https://github.com/masud-alam/ECO274LAB>) or from the journal web page:

(<https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1010372>)

Before you start, read the assigned paper several times carefully and do some reading from online resources and data science blogs related to the group-specific topics mentioned below; see how data scientists, statisticians, and economists have guided the community in addressing the same topics in the past. Data scientists could be considered the magicians of the data world. With an array of math, economics, finance, and data skills, data scientists translate raw data into valuable insights and make predictions for the future. Since data science continues to become more complex as technology advances, data scientists are highly valued professionals in most companies. Data science blogs are a great way to learn more about the field. I strongly encourage you to look at data science blogs to get an inside perspective on what it is like to work as a data scientist. Also, explore the opportunity to bring up insightful information to your presentation with all the industry's happenings. Please see the following web pages for more details:

<https://www.r-bloggers.com/about/>

<https://www.rstudio.com/blog/>

<https://www.tableau.com/learn/articles/data-science-blogs>

<https://www.thinkful.com/blog/data-science-blogs/>

Group name	Group-specific topics	General topics for all groups
Group 1	1. What is R-markdown? Significance of R-markdown as an open-source scientific and technical publishing system. 2. Paper review: Rules 1,3,5,6, 7 and 8.	<ul style="list-style-type: none"> - What is data, types of data, data structure, - What is Data Science? Relationship between data science, statistics, and economics/econometrics, What Can I (as an economist) do with data science analytics? - Tools that are essential to a career in data science: Python, R, Excel, SQL, Tableau. - Importance and popularity of open source data science tools, - How to master the basics of programming - Resources available for data scientists, such as data analytics blogs, data analytics YouTube channels, - What type of national/international job opportunities will be available for you after your graduation? - How to explore data science/economic data analysts' research internship/jobs? - How to create content to give back to the community - Data security and privacy
Group 2	1. What is Quarto? Significance of Quarto as an open-source scientific and technical publishing system. 2. Paper review: Rules 2, 4, 6, 7, 9 and 10.	
Group 3	1. What is Quarto? Designing Online Data Science Training for the Modern Age 2. Paper review: Rules 1, 2,3,4,9 and 10.	
Group4: Identity Imbalance	1. What is R-Studio Cloud system? Team Collaboration in R and Python. 2. Paper review: Rules 3, 5,6,8,9 and 10.	
Group 5	1. What is Quarto? Significance of Quarto as an open-source scientific and technical publishing system. 2. Paper review: Rules 5, 6,7,8,9 and 10.	
Group 6	1. What is R-Studio Cloud system? Team Collaboration in R and Python. 2. Paper review: Rules 1, 4,6,7,9 and 10.	
Group7: Analytics DESK	1. What is R-studio cloud system? Designing Online Data Science Training for the Modern Age 2. Paper review: Rules 2, 3,5,8,9 and 10.	
Group8: Pancharatna	1. What is R-markdown? Significance of R-markdown as an open-source scientific and technical publishing system. 2. Paper review: Rules 1, 4,5,8,9 and 10.	

The Presentation

Each group must create a maximum of 12 presentation slides (using Latex) for their presentation.

Presentations should be about 10-15 minutes long.

The presentation slides must contain the following items:

- A list of the names of the group members, registration IDs, and the presentation title (1 slide)
- Objective(s) of the presentation (1 slide)
- Significance of your presentation (1 slide)
- Addressing common data science-related topics mentioned in the table above (4 slides). Feel free to incorporate any visualization so that you can impress the audience.
- Addressing the group-specific issues from the journal paper (5)

The Grade

The presentation will be counted as 30% of your total grade. It will be evaluated based on the beauty of your Latex beamer preparation, overall presentation, conveying the core message to a non-technical person about the data science tools, open source R-statistical software, group agreement, and Q&A.

Each member will be awarded an individual grade on his/her presentation; there is no "group grade." So, the group must submit a credits page with a brief contribution that lists the specific tasks, roles, responsibilities, and work products contributed by each group member. The entire group should write the brief contribution/credits page. The assigned grade can be different for each individual depending on the quantity and quality of their contribution to the group effort and performance during the presentation (i.e., Q&A session). Good Luck!

Key information to remember:

Presentation: Oct 31, 2022 at 11 am;

Location: D 4001

The presentation beamer, Latex source code, and credits page are due at 11.59 pm on Oct 30, 2022

Submission: Please send your presentation materials to masudalam-eco@sust.edu