

For the project, you should choose one of the following three options.

Option 1. (Published Article with Available Data Set)

1. Find a recently published article (within the past 10 years) that includes terminology and statistical techniques studied in the course. Make sure that the data set is available. As an example, look at the article at this link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0200187> At the end of the article, there is a link to the raw data. <https://doi.org/10.1371/journal.pone.0200187.s002>
2. Read the article and try to reproduce some of the analysis using the data set. Write codes in SAS and R.
3. Email me your article and data set by **Thursday, April 11, 2024**, and get my approval of the contents of the article. Send materials to **stat495s24@gmail.com** with “Project” in the subject line. Please don’t choose topics that might offend anyone or be shocking to anyone (not too medical, religious, political).
4. Prepare a **5-minute** PowerPoint presentation to talk about the article and your analysis.
5. Email me your slides for approval at least **one day** before the day of your presentation. Send them to **stat495s24@gmail.com** with the subject “Slides”. The slides should contain an elegant design, an attractive first slide with the title and your name, page numbers, SAS and R codes and relevant outputs, and a gorgeous thank-you slide (see the sample slides).
6. Give your PowerPoint presentation at one of the sessions on **April 30, May 2, and May 7** (see the presentation schedule for details).
7. When listening to other presentations, you will be required to fill out a **questionnaire** (see the posted file). Your participation will be graded based on how well you complete the questionnaires. Presenters’ grades will be based on your answers to those questionnaires. Please **print 32 questionnaires**. You will be listening to 32 presentations and filling out 32 questionnaires.
8. Write a brief **report** of your project. It should contain a beautiful cover page, one or two pages of a write-up, consisting of introduction, background, data description, results, and conclusion. All the codes and relevant outputs should be placed in appendices, followed by the list of references. The report will be due in the pdf format sent to **stat495s24@gmail.com** by **10 PM on the day of your presentation**.
9. Your score for the project will be based on: **slides** (25 points), **presentation** (25 points), **attendance** (25 points), and **report** (25 points).

Option 2. (Raw Data and Your Own Analysis)

1. Find a recent data set (collected within the past 10 years) on which you can do one of the analyses we have done in the course or some new analysis that can be easily explained.
2. Run a quick SAS or R code to see that the results are interesting and worthy of presenting.
3. Email me your data set, code, and output by **Thursday, April 11, 2024**, and get my approval of the topic and the data set. Send materials to **stat495s24@gmail.com** with “Project” in the subject line. Please don’t choose topics that might offend anyone or be shocking to anyone (not too medical, religious, political, etc.)
4. Prepare a **5-minute** PowerPoint presentation to talk about the article and your analysis.

5. Email me your slides for approval at least **one day** before the day of your presentation. Send them to **stat495s24@gmail.com** with the subject “Slides”. The slides should contain an elegant design, an attractive first slide with the title and your name, page numbers, SAS and R codes and relevant outputs, and a gorgeous thank-you slide (see the sample slides).
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Option 3. (Theoretical Derivations)

1. Choose any topic covered in the course and derive the formulas we used for calculations. You are welcome to research that topic some more, beyond what we talked about in the lectures.
2. Do some theoretical work to see that it is doable and is worthy of presenting.
3. Send me a brief description of the chosen topic and some work that you have done by **Thursday, April 11, 2024**, and get my approval of the topic and the data set. Send materials to **stat495s22@gmail.com** with “Project” in the subject line.
4. Prepare a **5-minute** PowerPoint presentation to talk about the article and your analysis.
5. Email me your slides for approval at least **one day** before the day of your presentation. Send them to **stat495s24@gmail.com** with the subject “Slides”. The slides should contain an elegant design, an attractive first slide with the title and your name, page numbers, SAS and R codes and relevant outputs, and a gorgeous thank-you slide (see the sample slides).
6. Give your PowerPoint presentation at one of the sessions on **April 30, May 2, and May 7** (see the presentation schedule for details).
7. When listening to other presentations, you will be required to fill out a **questionnaire** (see the posted file). Your participation will be graded based on how well you complete the questionnaires. Presenters’ grades will be based on your answers to those questionnaires. Please **print 32 questionnaires**. You will be listening to 32 presentations and filling out 32 questionnaires.
8. Write a brief **report** of your project. It should contain a beautiful cover page, several pages of a write-up, consisting of the background, your derivations, results, conclusion, and further work. Supplemental information may be placed in an appendix, followed by the list of references. The report will be due in the pdf format sent to **stat495s24@gmail.com by 10 PM on the day of your presentation**.
9. Your score for the project will be based on: **slides** (25 points), **presentation** (25 points), **attendance** (25 points), and **report** (25 points).