EDF 9770 Project Report: General Linear Models on Your Own Data
Report due Sunday 4/19/2026 by 11:59 PM in Canvas
Report revisions due Friday 5/1/2026 by 11:59 PM in Canvas
(4 points for previous project plan document; 16 points for the project report)

Please submit your report in an editable format (e.g., .docx or .rtf extension) using this file-naming convention: *EDF9770_Lastname_Firstname_Report* (add an R for the revision)

The goal of this project is for you to practice conducting and reporting analyses using general linear models on real data. As previously stated in the project plan document, your analyses should predict **1–2 quantitative outcomes from 2–4 predictors** (of any kind). Your data should contain **one dimension of sampling and include only cases that are complete** for all variables in the analysis. Your report must be **at least ¾ complete** (for points attempted) before it will be accepted, and **late submissions will receive a −5 point penalty** (overall, not per day).

You will have the option to **revise your report once** for full credit (minus any late points), which will be due **Friday 5/1/26**. In your revised document, please use "**track changes**" (unless otherwise individually instructed) and **retain all my comments** (you may mark them as resolved if you wish). That way **I can see exactly** what I asked you to revise and how you did so!

First, here are some stylistic guidelines:

- Although a list of elements and their points is given below, **I do not want a numbered list back from you**. Instead, your report should be structured using the standard publication format for your discipline—most typically **APA style** (please let me know in a comment what style you are using otherwise). This formatting includes the heading structure, a minimum of 1.5 spacing, proper grammar, consistent font style and size throughout the text and tables (and figures if possible), and properly numbered and formatted tables and figures (i.e., no pasted output, clearly labeled variables, with titles and explanatory notes). Please place tables and figures at the end of your text. References are not required.
- Use **past tense** when describing how the data were obtained, how the analyses were conducted, and what you found. You may use present tense to refer to the contents of the current tables and figures (e.g., "Table 1 provides…"; "Figure 1 depicts…").
- Keep **user-defined acronyms to an absolute minimum** (two or fewer). **Stay consistent** in the words you use to refer to your variables—synonyms will only make your text harder to follow. **Boring but consistent writing is easier to read!**
- You should **not use the same short dash (-) for everything that is dash-like—please find and use the proper punctuation marks**. For instance, − is a real minus sign (used for all negative numbers), – is an en-dash (used for number ranges and for compound phrases acting as adjectives, such as parent–child conflict), and — is an em-dash (used to set off phrases that attach to or interrupt the previous phrase, as in the first sentence in this bullet;

an en-dash with spaces on both sides could be used in place of an em-dash). I have added keyboard shortcuts on my machines to make this easier (through the insert symbol menu in Word). Paying attention to these small details can help your writing look more professional!

- I would recommend **building your tables in a spreadsheet first** so that you can use the number formatting options to control the number of digits after the decimal and ensure values within a column are aligned at the decimal as they should be. Use leading 0 values for any number not bounded at 1. You should introduce each table and figure explicitly in the text and tell the reader what information it provides, but location callouts are not needed.

Second, here are the required elements for your 16 points:

1. Write a short section under the heading "**Purpose of the Present Study**" (1–2 paragraphs at most) that briefly introduces your topic and presents 1–3 research questions. **(0.5 points)**

2. Write a short section under the heading "**Method**" that contains the relevant information about your **sample** (under a subheading of "**Participants**") and **variables** (under a subheading of "**Measures**"). You may include any other information you feel is needed for the reader to understand the sample and the study design. Create and refer to one or more **tables of descriptive statistics** for all variables used in your analyses (e.g., Mean, SD, Minimum, and Maximum for quantitative variables; frequency and label per category for categorical variables). **(1 point)**

3. Begin the results section under the heading "**Results**". Under the first subheading "**Analytic Strategy**" to report what **software** was used (and which versions and packages specifically), **how predictors were centered or coded** (i.e., who is your reference person for the model intercept), and **sequence of models to be described** in the results that follow. **(0.5 points)**

4. Under a second subheading "**Bivariate Relations**" report in the text the **bivariate relations of each conceptual predictor with each outcome**, including direction, significance, and R^2. For quantitative predictors, this step should include an examination of **potential nonlinear** relationships (to be retained where needed). For categorical predictors with three or fewer categories, this should include all pairwise differences. For categorical predictors with four or more categories, this should include all pairwise differences given directly by the model and any other differences of specific interest. **(3 points)**

5. Under a third Results subheading **"Unique Relations**" report the outcome of at least one model with multiple conceptual predictors specified directly to answer your research question(s). A simultaneous predictor strategy should be used unless there is a strong rationale for a sequential predictor strategy. **For each model reported, create a table of results** including columns of estimate, standard error, *p*-value, and at least one partial effect size. Report **semi-partial R^2 for each conceptual predictor** (as created from nested model comparisons for multiple-slope predictors). In the text, **interpret each fixed effect estimate**

(note: you do not need to provide SE and *p*-values in the text if they are already in a table). Use the same guidance for pairwise comparisons given in #4 above. Link your findings to your research questions explicitly. **Create at least 1 figure using model-predicted outcomes for hypothetical cases** and describe how it illustrates your findings. Also comment on any differences in conclusion (or lack thereof) for your predictors' unique relations relative to their bivariate relations with the same outcome. **(8 points)**

6. Write a short section under the heading "**Discussion**" (1–2 paragraphs at most) that briefly **summarizes your findings** in relation to your research questions. **(0.5 points)**
7. Report of all of the above using proper manuscript style and formatting. **(1.5 points)**
8. Provide clearly **annotated syntax and output** under a heading of "**Appendix**". **(1 point)**