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| * **WD-1:** I can import data from a variety of formats   + csv   + xlsx   + txt * **WD-2:** I can select necessary columns from a dataset. * **WD-3:** I can filter rows from a dataframe for a variety of data types (e.g., numeric, integer, character, factor, date).   + Numeric   + Character   + Factor   + Date * **WD-4:** I can modify existing variables and create new variables in a dataframe for a variety of data types   + Numeric   + Character   + Factor   + Date * **WD-5:** I can use mutating joins to combine multiple dataframes.   + Inner Join   + Left Join   + Right Join   + ~~Full Join~~ (not needed) * **WD-6:** I can use filtering joins to filter rows from a dataframe.   + Semi Join   + Anti Join * **WD-7:** I can pivot dataframes from long to wide and visa versa   + Wide to Long   + Long to Wide * **R-1:** I can create professional looking, reproducible analyses using RStudio projects, Quarto documents, and the here package.   + Insert the names of the assignments meeting this criteria! * **PE-1:** I can write concise code which does not repeat itself.   + One function call instead of multiple   + across()   + map() * **PE-2:** I can write functions to reduce repetition in my code.   + Vector function   + Data frame function * **PE-3:** I can use iteration to reduce repetition in my code.   + across()   + map() with one input   + map() with two or more inputs | * **R-2:** I can write well documented and tidy code.   + ggplot2   + dplyr   + Function formatting * **R-3:** I can write robust programs that are resistant to changes in inputs.   + Any context   + Function stops * **DVS-1:** I can create visualizations for a variety of variable types   + 2 Numeric Variables   + 1 Numeric & 1 Categorical   + 2 Categorical   + Timeseries (Dates) * **DVS-2:** I use plot modifications to make my visualization clear to the reader.   + No tilting   + Modify text   + Reorder legend * **DVS-3:** I show creativity in my visualizations   + Non-standard Colors   + Annotations   + Creativity * **DVS-4:** I can calculate numerical summaries of variables.   + summarize()   + across() * **DVS-5:** I can find summaries of variables across multiple groups.   + Example 1   + Example 2 * **DVS-6:** I can create tables which make my summaries clear to the reader.   + Example 1   + Example 2 * **DVS-7:** I can show creativity in my tables.   + Example 1   + Example 2 * **PE-4:** I can use modern tools when carrying out my analysis.   + Not superseded or deprecated   + dplyr pipeline connected to ggplot * **DSSM-1:** I can simulate data from a variety of probability distributions.   + Example 1   + Example 2 * **DSM-2:** I can conduct common statistical analyses in R   + Example 1   + Example 2 |

**Grade Criteria**

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| **Letter Grade** | **Description of Work and Participation** |
| A  (Superior Achievement) | **Learning Targets:** Meets the criteria for a B and also demonstrates proficiency with DVS-3, DVS-7, and PE-3, demonstrating proficiency with nearly every learning target.  **Revising Thinking:** Submits revisions for *all but a few* assignments, includes thoughtful reflections on why revisions are being requested, demonstrating an understanding of the “bigger picture” ideas. Takes all feedback into account (including problems receiving an S) and incorporates into future assignments. **Extending Thinking:** *Consistently* making an effort to push oneself, attempting and succeeding at more difficult challenge problems, and incorporating what is learned into future assignments. **Collaborative Group Member:** Is *always* patient and respectful when collaborating, makes a concerted effort to follow coder / developer roles, excellent communication, willing to discuss and listen, open to new ideas, not controlling.  **Peer-Code Review:** *Every week* provides specific, constructive feedback, which is honest and kind and demonstrates a desire to help others grow. |
| B  (Good Achievement) | **Learning Targets:** Meets the criteria for a C and also demonstrates proficiency with objectives WD-5 through WD-7, DVS-2, PE-1, PE-2, PE-4, DSSM-1, and DSSM-2; effort is made toward DVS-3, DVS-7, and PE-3, but not at the level of proficiency  **Revising Thinking:** Submits revisions for *most* assignments (more than half), includes reflections on why revisions are being requested but reflections may miss some of the “bigger picture” ideas. These mistakes are fixed in future assignments, but additional feedback provided (on problems receiving an S) is not incorporated into future assignments. **Extending Thinking:** *Sometimes* making an effort to push oneself, attempting and succeeding at more difficult challenge problems. *Sometimes* what is learned is incorporated into future assignments. **Collaborative Group Member:** Is *always* patient and respectful when collaborating, excellent communication *mostly* follows coder / developer roles, but sometimes performs tasks outside their role.  **Peer-Code Review:** *Most* weeks provides specific, constructive feedback, which is honest and kind and demonstrates a desire to help others grow. |
| C (Acceptable Achievement) | **Learning Targets:** Demonstrates proficiency with objectives WD-1 through WD-4, R-1, R-2, DVS-4, DVS-5; slight effort is made toward WD-5 through WD-7 and PE-1 through PE-4, but not at the level of proficiency. **Revising Thinking:** Submits revisions for some assignments (less than half), frequently fails to include reflections on why revisions are being requested. Mistakes continue to be made in future assignments, and additional feedback provided (on problems receiving an S) is not incorporated into future assignments. **Extending Thinking:** Rarely making an effort to push oneself, mainly completing the easier challenges. **Collaborative Group Member:** Is *mostly* respectful when collaborating, but *does not* follow coder / developer roles, making *little effort* to collaborate with their partner.  **Peer-Code Review:** *Rarely* provides feedback on peer’s assignments. When feedback is given, it is vague and does not offer concrete ways the person’s code formatting could be improved. |
| D | **Learning Targets:** Demonstrates proficiency with objectives WD-1 through WD-4, R-1, R-2, DVS-4, DVS-5. No effort is made toward additional learning targets.  **Revising Thinking:** Seldom if ever submits revisions. When revisions are submitted, reflections on why revisions are being requested are not included. Mistakes are not fixed in future assignments. **Extending Thinking:** Seldom if ever makes an effort to push oneself, only completing the easier challenges. **Collaborative Group Member:** Is *mostly* respectful when collaborating, but *does not* follow coder / developer roles, making *little effort* to collaborate with their partner.  **Peer-Code Review:** *Never* provides feedback on peer’s assignments. |
| F | **Learning Targets:** Does not satisfy the criteria for a D.  **Revising Thinking:** Does not satisfy the criteria for a D. **Extending Thinking:** Does not satisfy the criteria for a D. **Collaborative Group Member:** Does not satisfy the criteria for a D. **Peer-Code Review:** Does not satisfy the criteria for a D. |