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| Download Robert H Smith School Of Business Logo Png Transparent -  University Of Maryland PNG Image with No Background - PNGkey.com | **BUDT 758T**  **Final Project Report**  **Spring 2023** |

**Section 1: Team member names and contributions**

*List all team members and summarize what they did to contribute to the project.*

**Section 2: Business Understanding**

*This section should comprise a 1-2 page executive summary laying out a business case for your model. Think about what type of person and/or business could use the model, what business actions could be taken based on the output of the model, or what value your predictions could generate.*

**Section 3: Data Understanding and Data Preparation**

*This section should include:*

1. *A table of the following format (for example):*

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Feature Name** | **Brief Description** | **R Code Line Numbers** |
| 1 | accommodates | Original feature from dataset | 1-5 |

1. *Graphs or tables demonstrating useful or interesting insights regarding features in the dataset.*
2. *(optional) Any additional comments about the data or the steps you undertook for data preparation.*

**Section 4: Evaluation and Modeling**

1. *Include a short (one-paragraph) description of the “winning” model, the variables included in the model, your estimated training and generalization performance, and how you decided that it was the winning model. Also list the line numbers in your R code where you generated the final predictions that you submitted for the contest.*
2. *For each type of model that you try, please list:*
   1. *The type of model (i.e. model family – for instance: logistic regression, decision trees, etc.).*
   2. *The R function and/or library used.*
   3. *Estimated training and generalization performance for this model.*
   4. *How you estimated the generalization performance for this model. This should include the methodology used (i.e. simple train/validation split, cross validation, nested holdout) as well as the specific parameters of the validation setup (i.e. how much data, how many folds, etc.).*
   5. *The best-performing set of features that you used in the model (you may also optionally note other features that you tried but didn’t include in the final feature set).*
   6. *The line numbers in your R code where you trained the model and estimated its generalization performance.*
   7. *(Required to receive at least 80 points): Any hyperparameters that you tuned and a list of the values that you tried.*
   8. *(Required to receive at least 80 points): Any fitting curves that you created for this model.*
3. *(Required to receive at least 85 points) Also include any learning curves that your team created as well as any insights generated by these curves.*

**Section 5: Reflection/takeaways**

*1-2 pages reflecting on the project. Possible questions that could be answered in this section include (but are not limited to):*

1. *What did your group do well?*
2. *What were the main challenges?*
3. *What would your group have done differently if you could start the project over again?*
4. *What would you do if you had another few months to work on the project?*
5. *What advice do you have for a group starting this project next year?*