**Your proposal must be a written report consisting of:**

**1. Title page - one page**

**2. Proposal page - one page of text (only), with a typical font size of ~11-12 pt**

**3. Additional info - up to two pages of figures, plots, and references, plus your timeline**

**Title page (one page)**

**Include:**

1. **Team name**
2. **Team members names**
3. **Section number and group number (on Canvas under people->project group). If you have members in multiple sections, type the section number that you want to present.**
4. **Name of the Kaggle project you chose**

**Proposal page (text only, one page only)**

Address the items indicated in the first paragraph of this assignment (above). Use typical font size, e.g., ~11-12 pt.

Include:

1. The problem statement

* What is the problem you hope to solve via your ML product?
* Who will want to use the product and why?
* What are current solutions to the problem (if any), and why might your ML product be an improvement?

2. The problem solution

* What class(es) of model do you expect to try/use?
* How will you quantitatively score the performance of your model? This is very important. Think critically about it.
* How well do you believe the model needs to perform for it to be useful?
* What performance do you guess the model might achieve?

3. The data

* A short description of your data (data source, size, structure, features, etc.)
* How will you use them for training and testing?

**Additional info (two pages maximum, no dense text)**

* Figures, plots, references, etc. -- Whatever items you feel help explain what your model will do and the data it works on/with.
* Give a timeline with **specific dates** for when you hope to **complete** project-relevant milestones. The details are up to you, but example milestones include:  
  + Construction of initial model (untrained) - This takes almost no time at all with the scikit-learn tools we have used to date. For more complex models, involving deep learning or reinforcement learning, there may be substantial coding required before you begin training your model(s).
  + Training of initial model (including hyperparameter search) and assessment of model performance
  + Training of revised model (or other model classes) and assessment of model performance
  + Project submission on Kaggle

| Name | Date |
| --- | --- |
| Feature Selection | 10/7/2022 |
| Model Selection | 10/11/2022 |
| Design Initial Untrained Model | 10/14/2022 |
| Data Preparation for Model | 10/21/2022 |
| Hyperparameter Search | 10/21/2022 |
| Initial Model Training and Assessment | 10/25/2022 |
| Write Report and Presentation | 10/27/2022 |
| Group Progress Report Presentations | 11/01/2022 |
| Design Revised Model | 11/8/2022 |
| Revised Hyperparameter Search | 11/11/2022 |
| Revised Model Training and Assessment | 11/15/2022 |
| Submit to Kaggle | 11/17/2022 |
| Write Report and Presentation | 11/29/2022 |
| Project Final Presentations | 12/01/2022 |