All students are required to be involved in the final project. It will be a team project, where each team can have up to 4 people.

## 0. Schedule

~~Team setup: 9/13~~
Project proposal: **10/20**
Code and report submission deadline: 12/1
Project presentation: 12/2-11 (4 classes)

## 1. Team formation

If you form a team, please fill the team signup form until 9/13.
If you could not find a team, don't worry :) We will find a team for you if your name is not on the signup form after 9/13. If your team has less than 4 people but if you want to host additional students, please mark 'Y' to the last column of the signup form. Otherwise, mark it to 'N'.

## 2. Topics

You can choose between the two options for the final project.

**Option 1**. **Apply the existing models or techniques to your own problem**
In this option, you are going to apply the existing (or your own) techniques to solve your own problem. You can use any existing implementations of the papers, and there are no limits on the scopes/topics you can choose. For instance, you can create a new mobile application, web service, interactive demo, etc. using the existing models/source code of any papers. You can also conduct an empirical study by applying various existing models to your problem to compare/discuss their pros/cons. There will be extra credit if your project satisfies one (or more) of the following:

- Interesting problem (i.e. your project addresses a problem with some practical impacts or has interesting/fun aspects).
- Comprehensive evaluation (i.e. providing a convincing evaluation/ablation study of the model on your task/dataset.)
- Additional contributions (e.g. modifying the model architectures/formulations/training to improve your baseline model on your task. Performing comparisons of different models on your problem.)

**Option 2**. **Choose a paper and reproduce the results**
In option 2, you will choose a paper and implement the algorithm. You can refer some utility functions from the other codes (e.g. data pre-processing, visualization), but the core algorithm (e.g. codes for model, training, inference, etc.) should be written by yourself. Based on the

implementation, you will reproduce the experiments presented in the paper and discuss the results (e.g. challenges in implementation/experiments, differences to the original results, discussions on the source of differences, etc.). There will be extra credit if your project satisfies one (or more) of the following:

- High impact (i.e. there are no other public implementations of your paper.)
- Reproducibility (i.e. how close your reproduced results are to the ones in the paper)
- Additional contributions (e.g. additional experiments on other datasets, additional proof, new insightful visualization, etc.)

## 3. Deliverables

- **Source code**: create a Github repository and provide a link to it. Your repository should contain 1) training/inference codes and 2) the pre-trained models that can be used to reproduce your results. Please be mindful of providing the well-documented ReadMe and source code comments to make grading efficient.
- **Final report**: you are going to write a short project report using a latex template provided on the course website. The final report is strictly limited to a maximum of **4 pages**. More detailed instructions on the final report will be announced later.

## 4. Presentation

All teams are expected to present their works during the last 2 weeks of the course (Dec. 2-15). The detailed presentation order/time will be announced later.

## 5. Project proposal

Students can submit their project proposals until 10/20. This is not mandatory, but we highly encourage you to exploit this chance to get some useful feedback on your project from the teaching staff (e.g. we will give you some comments such as the feasibility of your project, potential problems/challenges in your problem settings, etc.). There are no predefined formats/page limits for the proposal, but it will increase the chance to get more meaningful comments if your proposal contains the following:

- **Clear descriptions of the goal**; what will be the final outcome of the project? Which model are you going to use to address the problem? If you plan to reproduce a paper, what is the paper and which part of the experiments are you going to reproduce?
- **Plan for training**: which datasets are you going to use to train your model? If you plan to collect your own data (although we do not recommend it), how are you going to do it? how big is your data?
- **Plan for evaluation:** how are you going to evaluate your model? Which datasets and evaluation metrics are you going to use for evaluation?