We will grade final project based on metrics defined as follows:

Entire final project (100%):

- **Proposal (10%) (11/1/19)**: Goal / Intro, Data, Methods, System, Schedule.
- **Midpoint (10%) (11/22/19)**: Graded based on your project execution.
- **Final presentation and report (80%)** :
  - **Presentation (25%) (12/13/19)**: Clarity, Novelty, Technical Depth, Business Value, Demo.
  - **Report (40%) (Due 12/20/19)**: Conference-style papers between 4~10 pages. See the metrics for report below.
  - **Video (10%) (Due 12/20/19)**: Upload to Youtube.
  - **Code (5%) (Due 12/20/19)**: Upload to Github.

While the report should include these sections and would be graded based on the following:

- **Title, Author(s)**
- **Abstract**: Briefly describe your problem, approach, and key results.
- **Introduction (5%)**: Describe and define the problem you are working on. Why is it important? Include an overview of your methods and results.
- **Related Work (5%)**: Discuss published works or approaches that are related to your project. What's the benefit or drawback of the previous works? What kind of problems have they solved? How is your approach similar or different from others?
- **Data (5%)**: Describe the data you are working with for your project. What type of data is it? Where did it come from? How much data are you working with? Did you have to do any preprocessing, filtering, feature engineering, or other special treatment to use this data in your project?
- **Methods (7%)**: Discuss your approach for solving the problems that you set up in the introduction. Why is your approach the right thing to do? Did you consider alternative approaches? Have your tried some methods that didn't work out? It may be helpful to include figures, diagrams, or tables to describe your method or compare it with other methods.
- **Experiments (7%)**: Discuss the experiments that you performed to demonstrate your approach solves the problem. The experiments will vary depending on the project, but you might compare with previously methods, determine the impact of the components of your system, experiment with different hyper-parameters, architectures, or algorithms, use visualization techniques to gain insight of how your model works, etc. Graphs, tables, and figures are highly recommended to be included to illustrate your experimental results.
- **System Overview (7%)**: Describe the software architecture and tech stacks of your application. Discuss potential bottlenecks and improvements that could be made. Mention the software packages that you used. Mention how to use your application. You could provide screenshots to your application.

- **Conclusion (0%):** Summarize your key results. What have you learned? What problems have you discovered and solved? Suggest ideas for future extensions or new applications.
- **Writing / Formatting (4%)** Is your paper clearly written and nicely formatted?
- **Supplementary Material**, not counted toward your 10 page limit. You may include some supplementary materials including but not limited to:
  - Code structure.
  - Link to your Github repo and youtube video.
  - Link to your application if deployed online.