LEGOLAS Rubric

General:
You are being graded on successful completion of the challenges, as well as your data presentation, final presentation, and group participation. To achieve credit for completing challenges, you must show your final demonstration to a TA (or take a video). You will submit your jupyter notebook (from *LegolasOutline.ipynb* template) and your final presentation as deliverables.

90 points total

(**10 pts**) Successfully complete **CHALLENGE 1**
- *Show TA / Take Video (5 pts)*
- *Report Mean and Variance (5 pts)*

(**10 pts**) Successfully complete **CHALLENGE 2**
- *Show TA / Take Video (2 pts)*
- *Plot pH vs [A]/[B] ratio (2 pts)*
- *Fit HH equation to data (3 pts)*
- *Report correct dissociation constant (pKa) from fitting (1 pt)*
- *Dissociation constant in range of 4.5 - 5.0 (2 pts)*
    - *correct value is 4.76*

(**15 pts**) Successfully complete **CHALLENGE 3**
- *Fit data using GP w/ RBF kernel & optimize hyperparameters (5 pts)*
- *Repeat again with partial data range (3 pts)*
- *Plotting GP with confidence interval (4 pts)*
- *Complete all actions for part (c) (3 pts)*

(**20 pts**) Successfully complete **CHALLENGE 4**
- *Show TA / Take Video (7 pts)*
- *Acquisition function for targeting pH = 4.75 (7 pts)*
- *Plotting acquisition function and GP with confidence interval (6 pts)*

(**25 pts**) Final Presentation
- *Demonstrate understanding of active learning, GP, and acquisition functions*
- *Explain group process for solving challenges*
    - *Discuss problems faced and how they were solved*
- *Present data and findings from autonomous studies*

(**10 pts**) Group Participation
- *Based on peer reviews and class attendance*