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MAE 598: Design Optimization
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Project 2:
ANSYS DOE and Design Optimization
11/17/2021

Checks:**Statis Structural Setup:****Modal Setup:****Transient Thermal Setup:****Define Input Parameters:**

1. What are your design variables, constraints, and objectives?
2. What are the potential trade-offs between your objectives?
3. Are your variables continuous? Or are they discrete/integer?
4. Do you have analytical objective/constraint functions? And are they differentiable?
5. Based on the above answers, what optimization methods will you choose?
6. Perform a sensitivity analysis and comment on the importance of your variables?
Also, do you observe monotonicity (i.e., the objective always goes up or down with a variable)?
7. Compare your optimal design against the initial one (e.g., see the following comparison on the brake disc design) AND comment on whether the optimal design is reasonable.

