**STAT 5309- SP2019**

**SEMESTER PROJECT**

**\* DUE: Fri, May 10.**

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| * **Answer all question parts.** * **Important R outputs/remarks/comments must be put in boxes. All plots must be accompanied by some comments/remarks** * **NO DATASET INCLUDED.**  1. **Problem [6.12]**     Add the following specifics:  (c) Build a RSM model (2nd order, 1st order with interaction). Choose one which works. (c2) Perform Daniel plot and Lenth plot. What is the model ‘s R-square.  (d) Find the cook distance. Take out the outlier(s). Rebuilt the rsm model on new data.  (f) Perform a canonical analysis. Do a contour plot. Any optimal response?   1. **Problem [6.15]**       Add the following specifics:   1. Change the factors name (“Temp”, “Content”, “Method”, “Refiner”, “Length”). 2. Perform effects Daniel plot and Lenth plot.   (c) Build a RSM model (2nd order, 1st order with interaction). Choose one which works.  (d) Take out outliers, if any.  (f) Perform a canonical analysis on the model. Is there an optimal response?  Perform contour plot of Temp and Content.   1. **Problem 3[11.12]**      1. Estimate the factor effects. Which factors appear to be large? 2. Perform an analysis of variance. Do any factor affects . Use 3. Build a RSM models (choose a model which works). Daniel plot/Lenth plot. 4. Perform a residual analysis. Take out any outlyers. 5. Perform a canonical analysis. Any optimal response. Do a contour plot of Time-Temperature, Time-Catalyst, Temp-Catalyst. 6. **Problem 3 [ 11.9]** |