Rubric for MechaCar:

Criteria	Demonstrating Proficiency 30 to > 27 points	Approaching Proficiency 27 to > 24 points	Developing Proficiency 24 to > 22 points	Emerging 22 to > 0 points	Incomplete 0 points	Pts
Deliverable 1: Linear Regression to Predict MPG	✓The csv file is imported and read into a dataframe. ✓An RScript is written for a linear regression model to be performed on ALL SIX variables. ✓An RScript is written to create the statistical summary of the linear regression model with the intended p-values. ✓The summary addresses all THREE questions.	✓The csv file is imported and read into a dataframe. ✓An RScript is written for a linear regression model to be performed on ALL SIX variables. ✓An RScript is written to create the statistical summary, but the p-values are higher for some variables. ✓The summary addresses TWO of the THREE questions.	✓The csv file is imported and read into a dataframe. ✓An RScript is written for a linear regression model to be performed on ALL SIX variables. ✓An RScript is written to create the statistical summary, but there is no overall statistical significance. ✓The summary addresses ONE of the THREE questions.	✓The csv file is imported and read into a dataframe. ✓An RScript is written for a linear regression model to be performed on ALL SIX variables. ✓An RScript is written for the statistical summary but there is an error and no output. ✓The summary addresses ONE of the THREE questions.		30.0
	Demonstrating Proficiency 30 to > 27 points	**Approaching Proficiency 27 to > 24 points**	**Developing Proficiency 24 to > 22 points**	**Emerging 22 to > 0 points**		
Deliverable 2: Summary Statistics on Suspension Coils	✓The csv file is imported and read into a dataframe. ✓The total summary dataframe has ALL FOUR metrics for all the manufacturing lots. ✓The lot summary dataframe has ALL FOUR metrics for each manufacturing lot. ✓The summary addresses the design specification requirement for all the manufacturing lots and ALL THREE lots	✓The csv file is imported and read into a dataframe. ✓The total summary dataframe has ALL FOUR metrics for all the manufacturing lots. ✓The lot summary dataframe has THREE of the FOUR metrics for each manufacturing lot. ✓The summary addresses the design specification requirement for all the manufacturing lots and TWO of THREE lots	✓The csv file is imported and read into a dataframe. ✓The total summary dataframe has ALL FOUR metrics for all the manufacturing lots. ✓The lot summary dataframe has TWO of the FOUR metrics for each manufacturing lot. ✓The summary addresses the design specification requirement for all the manufacturing lots and ONE of THREE lots	✓The csv file is imported and read into a dataframe. ✓The total summary dataframe has ALL FOUR metrics for all the manufacturing lots. ✓The lot summary dataframe has ONE of the FOUR metrics for each manufacturing lot. ✓The summary addresses the design specification requirement for all the manufacturing lots OR TWO of THREE lots		30.0

	Demonstrating Proficiency 20 to > 17 points	**Approaching Proficiency 17 to > 14 points**	**Developing Proficiency 14 to > 12 points**	**Emerging 12 to > 0 points**		
Deliverable 3: T-Test on Suspension Coils	✓An RScript is written for a t-test that compares all manufacturing lots against the mean PSI of the population. ✓An RScript is written for ALL THREE t-tests that compare each manufacturing lot against the mean PSI of the population. ✓The summary addresses the results across all manufacturing lots and ALL THREE lots	✓An RScript is written for a t-test that compares all manufacturing lots against the mean PSI of the population. ✓An RScript is written for TWO of THREE t-tests that compare each manufacturing lot against the mean PSI of the population. ✓The summary addresses the results across all manufacturing lots and TWO of THREE lots.	✓An RScript is written for a t-test that compares all manufacturing lots against the mean PSI of the population. ✓An RScript is written for ONE of THREE t-tests that compare each manufacturing lot against the mean PSI of the population. ✓The summary addresses the results across all manufacturing lots and ONE of THREE lots.	✓An RScript is written for a t-test that compares all manufacturing lots against the mean PSI of the population. ✓An RScript is written for ONE of THREE t-tests that compare each manufacturing lot against the mean PSI of the population, but there is an error. ✓The summary addresses the results across all manufacturing lots OR ONE of THREE lots.		20.0
	Demonstrating Proficiency 20 to > 18 points	**Approaching Proficiency 18 to > 15 points**	**Developing Proficiency 15 to > 13 points**	**Emerging 13 to > 0 points**		
Deliverable 4: Design a Study Comparing the MechaCar to the Competition	The statistical study design has the following: ✓A metric to be tested is mentioned. ✓A null or alternative hypothesis is described. ✓A statistical test is well described to test the hypothesis. ✓The data for the statistical test is well described.	The statistical study design has the following: ✓A metric to be tested is mentioned. ✓A null or alternative hypothesis is described. ✓The statistical test to test the hypothesis is not fully described. ✓The data for the statistical test is not fully described.	The statistical study design has the following: ✓A metric to be tested is mentioned. ✓A null or alternative hypothesis is not well described. ✓The statistical test to test the hypothesis is not well described. ✓The data for the statistical test is not well described.	The statistical study design has the following: ✓A metric to be tested is mentioned. ✓A null or alternative hypothesis is not well described. ✓The statistical test to test the hypothesis is barely mentioned. ✓The data for the statistical test is not well described.		20.0