CS/CE 457/464 - Homework Assignment 3: Statistical Inference
Due Date: Monday, September 16 at 11:59 pm

Purpose:
Demonstrate exploration of data via Hypothesis Testing methods using Python and tell interesting stories and insights around your statistical inferences.

Points: 100

Perform Hypothesis Testing to choose between Null and Alternative Hypothesis and provide justification to your decision with explanation.

1. If math_score of males is greater than females.
2. If math_score of Non Doctors is greater than Doctors (Hint: Use career_aspirations to find Doctor and Non Doctors)
3. If weekly_self_study_hours of males are greater than females.
4. If math_score of no part_time_job male students are greater than part_time_job male students.
5. If the average of history_score is less than geography_score.
6. If the average of math_score is greater than biology_score.
7. If weekly_self_study_hours of extracurricular_activities is less than no extracurricular_activities.
8. If absence_days of females are less than males.
9. Is there any Association between gender and career_aspiration.
10. Is there any Association between gender and part_time_job.

For each question, write Null and Alternative Hypothesis first. Then **interpret all the results with your final decision on Hypothesis Testing. No points will be given without explanation.**

Deliverable: Submit a ipynb file containing your code, outputs and explanations. Include homework title, your name and your email on top of your ipynb code file.