

Project 7: Formal Inference

Objective: Design and conduct a study to answer a question of interest through applying the principles of formal statistical inference.

Procedure: You may work alone, or in groups of up to four people. Everybody must participate and contribute to the project. Class time will be allotted for this project, but you may also spend time outside of class as necessary.

Requirements:

1. **Introduction:** Select a question from the suggestions list or devise your own question of interest. If you devise your own question of interest, then it must be approved by Ms. Weinstein before you can begin. Briefly explain why you are interested in this and what, if any, your expectations are for the result. Why is this an important question to study?
2. **State:** Establish the hypotheses that will help you answer your question. For any symbols used (μ , p , etc.), describe their meaning in words also. Determine alpha, the level of significance that you will use for your test.
3. **Plan:** Determine how you will satisfy the conditions for inference. How will you gather your data? Verify that all the conditions for inference are met. Briefly summarize your plan for conducting this study.
4. **Do:** Conduct your study, gather your data, enter it into Minitab, and run the appropriate inference procedure. Include any relevant graphs, charts and Minitab output to support your conclusion.
5. **Conclude:** State the formal inference conclusion and also interpret the result in context.
6. **Reflection:** How do the results compare to your expectation prior to conducting the study? How convincing are the results of your study? What might have affected the results of your study to make it less reliable? What follow-up questions does this study suggest?
7. **Prepare a slide presentation of all the steps of your project to share with the class.**

Due: Wednesday 3/25/15

Presentations will be done in class on Wednesday 3/25 and Thursday 3/26

Project 7 Rubric:

Description of Project Presented	Grade
<p>All the requirements of the project are met beyond the minimum. Final result shows clear evidence of additional effort to expand on the project in keeping with the project objective. Final result shows evidence of thoughtfulness and clear attempt to produce an academically sound project. Evidence of extra care for precision, accuracy and clarity are also apparent.</p>	A
<p>All the minimum requirements of the project are met, with additional effort to expand on the project in keeping with the project objective. Final result shows evidence of thoughtfulness and clear attempt to produce an academically sound project. Evidence of extra care for precision, accuracy or clarity is also apparent.</p>	B
<p>At least the minimum requirements of the project are met. Final result shows evidence of thoughtfulness and clear attempt to produce an academically sound project.</p>	C
<p>Not all requirements met to at least the minimum level, and/or final result shows evidence of careless work, or lack of thoughtfulness, or lack of academic sincerity.</p>	D
<p>Project not submitted, or submitted with a majority of the requirements lacking.</p>	E