**Mini-Project: Bootstrap Inference**

**Learning Objective**

Learn to calculate a confidence interval using the bootstrap method.

Learn to calculate a p-value using the bootstrap.

Learn to perform hypothesis tests using the bootstrap.

Learn to apply the bootstrap to perform tests where the frequentist method does not apply.

**Time Estimate: 1 - 1.5 Hours**

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| **Criteria** | **Meets Expectations** |
| Completion | The code runs successfully (no errors are printed).  All plots are clearly labeled (especially axes) and interpretable.  Appropriate use is made of markdown cells for written answers. |
| Process and understanding | The submission shows that the student used the correct calculations or functions to answer questions.  The submission shows the correct solutions to all of the questions have been supplied. NB use of the specified random seed should produce consistent results, but differing orders of execution may yield slightly varying results, which is acceptable.  The submission shows that all questions were answered correctly, in detail, and the explanations demonstrate an understanding of the relevant methods and their appropriate application to a problem. |
| Presentation | The project is delivered in a Jupyter notebook, uploaded to GitHub, and doesn't contain any unnecessary printouts. |