

Lab 13

Model Comparison

Ex. 1. (3p)

1. Based on the polynomial model from the course (lecture 11), in the code that generates the data (from the file `dummy.csv`), change `order=2` to another value, for example `order=5`. (0.5p)
 - a. Then perform inference with `model_p` and plot this curve. (0.5p)
 - b. Repeat, but use a distribution for beta with `sd=100` instead of `sd=10`. How are the curves different? Also try this with `sd=np.array([10, 0.1, 0.1, 0.1, 0.1])`. (1p)
2. Repeat the previous exercise, but increase the number of data points to 500. (0.5p)
3. Perform inference with a cubic model (`order=3`), calculate WAIC and LOO, plot the results, and compare them with the linear and quadratic models. (0.5p)