

Using the data provided in `noisy_norm_data.csv`, create a model which uses the first five Legendre Polynomials as basis functions. You will want to use functions such as SciPy's `optimize.minimize` and `special.legendre` and NumPy's `linalg.norm` (or equivalents in the language of your choice) to make this problem easier

(a) What coefficients do you find when your error function is the l_2 norm of the residual?

(b) What coefficients do you find when your error function is the l_1 norm of the residual?

(c) What coefficients do you find when your error function is the l_∞ norm of the residual?

(d) Which model is “best”? How do you know?