

Regression Analysis Assignment3

November 1, 2021

Problem1. Suppose $0 \leq x_1 \leq x_2 \leq \dots \leq x_n \leq 1$. Assume that $h > \max\{x_2, 1-x_{(n-1)}, \frac{1}{2}(x_3-x_1), \dots, \frac{1}{2}(x_n-x_{n-2})\}$. Then prove that there are at least two x_i 's in $[x-h, x+h]$ for all $x \in [0, 1]$.