BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY

Department of Computer Science and Engineering

July 2022 CSE 218 Online Assignment on

Linear and Non-Linear Regression (B2)

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Linearize the model $y = \frac{ax^2}{b+x^2}$ and using it write a python code to estimate a and b based on the following data. Develop a plot of your fit along with the data. Predict the values of y at $x = 2.0, 4.5$ and show it in the plot. Assume least square fit for this problem.

You are not allowed to use any library function like `polyfit` or `lstsq` to fit your model.

x	0.5	0.8	1.5	2.5	4.0
y	1.1	2.4	5.3	7.6	8.9

Marks distribution:

- Linearization: 8
- Parameter estimation: 8
- Plotting: 4