Practical-4

"Analyze monthly rainfall data for a city (given dataset) to determine the most suitable probability distribution that models the rainfall pattern. Fit multiple candidate distributions (Normal, Lognormal, Gamma, Weibull) to the dataset, compare their goodness-of-fit using the Kolmogorov–Smirnov (K–S) test, and visualize the fitted probability density functions over the observed data. Finally, conclude which distribution best describes the rainfall data and justify its suitability."

Rainfall Dataset (in mm)

85, 102, 97, 110, 89, 76, 45, 60, 55, 72, 95, 120,

132, 150, 145, 160, 180, 200, 210, 190, 175, 155, 140, 130,

60, 75, 80, 95, 100, 115, 130, 145, 160, 170, 190, 210,

230, 220, 210, 200, 185, 170, 150, 130, 110, 95, 85, 70,

50, 65, 78, 82, 96, 105, 115, 125, 140, 155, 165, 175