

HW1_wgeither

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Problem 1

Primers Done

Problem 2

Saved to Github

a) I got my undergrad in mathematics with a minor in stats, so I had a fair amount of exposure and use in R. For the past 2 years I worked as a Data Analyst at an Ad-tech company where I primarily used Python, SQL, and C#. That being said, in this class I would love to:

- Refamiliarize myself with linear regression & ANOVA in R
- Learn about parallel computing and how to connect to the university's supercomputer
- Learn about Monte Carlo procedures and Power as I'm not sure if this was covered in my undergrad curriculum

b)

Binomial Distribution:

$$(1) P(X = x|n, p) = \binom{n}{x} \cdot p^x \cdot (1 - p)^{n-x}; x = 0, 1, 2, \dots, n; 0 \leq p \leq 1$$

Discrete Uniform:

$$(2) P(X = x|N) = \frac{1}{N}; x = 0, 1, 2, \dots, N; N \in \mathbb{N}$$

Exponential Distribution:

$$(3) f(x|\beta) = \frac{1}{\beta} e^{-x/\beta}, 0 \leq x \leq \infty, \beta > 0$$

Problem 3