Andrew Kirby
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LING82100

Homework 2

Part I

In Part 1, I ran a binomial test on two values: one for the number of prepositional datives (xpd), and one for the number of double objects (xdo). The sum of these two numbers gave me the number of trials (n). I then ran two binomial tests with binom.test, one for xpd and xdo, both having the same n value, and both with a p of 0.5, because they are equiprobable.

- The p-value for both was 2.2e-16, the lowest possible number R can generate
- The 95% confidence intervals:
    - For prepositional dative: .1959431 and .2293504
    - For double object: .7706496 and .8040569
- The test was not significant because the p-value was way below 0.05

Part 2

First, I made a variable ptb to open the .tsv file. Then, I calculated the wins of each using the double equals == . I put this into two variables: Stanford.correct and NLP4J.correct. Then, I calculated the wins over each using & and !, and set those to the variables x1 and x2. Finally, I did another binomial test: binom.test(min(x1, x2), x2 + x1, p = 0.5).

- Wins for Stanford tagger over NLP4J: 943
- Wins for NLP4J over Stanford: 1016
- With a p-value of .1038, we can conclude that one tagger is significantly better than the other