In-Class Likelihood Assignment

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1. As a group, experiment with different values of *λ* to find a value that maximizes the sum of log-likelihoods of the hypothetical observations.
   1. What value for λ*λ* did you select?
      1. Lambda = 2
   2. How did you choose a value?
      1. Plotted the following code & found the x value that gave the highest y (2)

x\_wiwa = c(0:10)

plot(x = x\_wiwa, y = sum(log(dpois(2, x\_wiwa)))

And then experimented with values around 2 to find which yielded the highest y

sum(log(dpois(2, 2)))

[1] -1.306853

> sum(log(dpois(2, 2.1)))

[1] -1.309272

> sum(log(dpois(2, 1.9)))

[1] -1.309439

What was most challenging about this exercise:

Megan: I had a lot of errors in R when trying to work with the data set and make plots, and when these errors were resolved we were out of time. I was also a bit confused about the lambda value that maximizes the sum of log-likelihoods.

Ragib: I had difficulty with loading the datasets into R and received a lot of errors.

Ollie: I had a lot of trouble getting R to behave correctly—for whatever reason, it wouldn’t plot anything even after running dev.off() and restarting RStudio. This was compounded by having done the walkthrough last week and then coming back to it today having kind of forgotten a lot of what we went through.

Amira: I think this assignment would have gone better for us if we had definitions of what maximizing the sum of log-likelihood is. And a comparison of lamda values that maximizes the data and one that does not. I thought this was a great exercise for R however