

## MATH 598/782 - PROJECT 7

*Please submit your project by 6.00 pm (EST) on Tuesday 22th December by uploading a single pdf to myCourses.  
Further extensions may be allowed on request.*

For the two sample data

`www.math.mcgill.ca/dstephens/598-Bayes-2020/Projects/Project7.csv`

compute the Bayesian posterior probability that the two samples come from a single Poisson population with parameter  $\lambda$  rather than two Poisson populations with parameters  $\lambda_1$  and  $\lambda_2$ , where all the model parameters are unknown, and believed independently to follow  $Gamma(10, 2)$  priors. Assume also that, *a priori*, the two possibilities (one population or two populations) are deemed equally probable.