Convergence and minimum observation size

- ▶ The EM algorithm is not known to converge particularly quickly
- ▶ For a 2x2 with 1,000 observations, it takes about 60 iterations, or 0.3 seconds, to trigger the stopping condition of less than 10^{-4} change in log likelihood
- ▶ since our mixture model is not the true generative model, we can consistently converge on estimates of the mixing proportions that are incorrect.
- ▶ this happened with 5x5 grids especially, and could be a reflection of over-fitting, or a symptom of too-tight a grid
- ▶ we did not see any degeneracies–we always converged on the same answers, even if they weren't the "true" values.