

- Read 1000 events (values) from the file events20130204.txt
 - what does the distribution of events look like?
 - what is its sample μ and σ ?
- What is the probability (density) of the data, if it is Normal with the observed sample μ and σ ?
 - you might want to compute log probabilities!
- Now suppose the events are from a Student t with unknown μ, σ, ν
 - what is the probability (density) of the data for $\mu=2.$, $\sigma=1.2$, $\nu=5.$?
 - how much more likely is this than the Normal hypothesis?
- Find the MAP (maximum a posteriori) estimates for μ, σ, ν
- Fixing parameters at their MAP values, allow one parameter at a time to vary, and graph its Bayes posterior probability
- Now, instead of fixing any parameter values, graph the Bayes posterior of each if you *marginalize* over the other two
 - this is the real way to do Bayesian parameter estimation