# V4 Dataset Exercises (script1\_pillow\_V4data\_STAandGaussianGLM.m)

1. Run the .m script (fits Gaussian-linear GLM to V4 data)
2. Fit Poisson GLM to V4 data using glmfit
3. Fit nonlinearity: f(x) = p(spike|x) =
   1. (see ratio of histograms, Tutorial 1)
4. Test of linear combination of plaid components:
   1. Redo GLM fitting with binary representation of stimulus (1 bin for each possible plaid, i.e. combination of orientations) + compare performance
      1. See Pillow\_script\_v2.m to understand the current 1x9 representation
      2. You can re-represent the stimulus from the representation you have

OR try to do it from the raw data

1. Fit coupled GLM to fine-timescale data (ignore stimulus)
   1. Or the coarse-timescale data (100ms) and keep the stimulus info
   2. Pay attention to what the spike history would be (which dimensions are concatenated? This is tricky)