13 August 13th

13.1 Goals for the day

Goals from Last Time

1. *Test LaTeX installation*
2. *Continue Readings*
3. *Continue analysing Gauley errors?*

Additional Goals

4. Look at the code
5. Look into potential Tremont errors?
6. Talk to Cedric about errors

13.2 Progress/Notes

13.2.1 Test LaTeX installation

LaTeX installation works?

Compiles, works just fine. Was a slight adjustment from the windows MikTex GUI, but largely the same. Developed the format used here.

13.2.2 Readings

13.2.3 Gauley Errors

Cedric says that the Gauley errors AREN'T ERRORS. It's actually just a regular part of the code output. Also the "#warning:iterations terminated because half-step sizes are very small" isn't a problem. Copasetic.

13.2.4 Code Examination

It seems like I should examing roc.appr.r first. any *appr* is for approximating the codon bias without knowing the expression levels, which is my goal.

What does roc.appr.r do?

1. Get initial ϕ value from data/ex.test.rda
2. Change renew.iter variable from 100 to 3 in .CF.AC, which is in data/control.r
3. Calls cubappr to do the actual approximations. Times this process. cubappr is exported to mycubappr in mycubappr.r

(a) Setup model and check data, including data structures and storage

(b) Initialize ϕ using my.pInit in my.init_param.r. Uses EMCluster iff estimate.bias.Phi (false by default)

(c) Initialize β, a vector of amino acids

(d) Runs MCMC, starting at line 124

i. my.drawBConditionalAll Updates β. Seems quite important. uses VGAM? Further study

ii. Other parameters: nu.Phi and sigma.Phi

iii.

13.2.5 Tremont Errors?

Likely because I was using the cubfits-0.1.0, the version on CRAN, while I should be using cubfits-0.1.1, the version in cubfits-master.tar.gz Moving to Gauley?

13.3 Future Goals

1. Continue analyzing cubfits-master/R files, especially mycubappr.r
   (a) Especially study the MCMC from mycubappr.r 124-196
   (b) nu.Phi and sigma.Phi?
2. Read REU Paper on Nonsense Model