**Ideas on what Data Analysis and Modeling to Cover**

So far, we have focused on basic programming, visualization and input/output. For the next few weeks, we will focus on data analysis and modeling. I am asking the students for suggestions of what we will cover, and voting on what most people want.

Please identify your ranked top 5 topics from the **Things we could do** list below

**Things we are definitely doing:**

Differential Equations

* Predator prey models

Model fitting:

* Correlation
* Root Mean Square Error (RMSE)
* Curve fitting and analysis of fit, AKA regression analysis (linear and non-linear)
* Akaike weights for determining model fit

**Things we could do:**

Model fitting:

* Logistic regression

Timeseries analysis:

* Fourier Transforms
* Filtering

Spatio-temporal decomposition:

* EOFS/PCA (Empirical orthogonal functions, principal component analysis)
* K-means clustering
* Neural networks