## Data Analysis methods that are changing (CEDAR) science

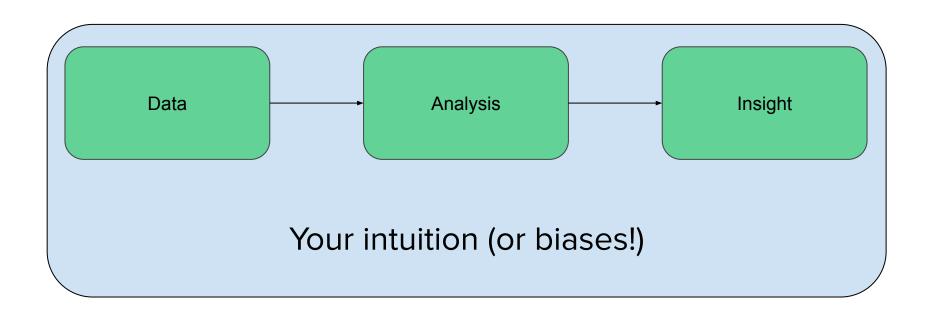
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### Approaching the problem



### Approaching the problem



### What's new?

### Choice of tools is often crucial

The usual suspects -

- Python (NumPy, Scikit-learn, Pandas .. ) [Sorry IDL!]
- Visualization tools (Matplotlib, Bokeh, Seaborn)
- Jupyter Notebooks
- Git / GitHub
- Twitter?!

Check out the 'Snakes on a spaceship' workshop!

### Demo time!

### Git is intimidating, but ...

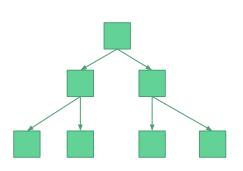
There are plenty of resources online to learn, and the best way to learn is by asking questions!

My personal favorite resource: <a href="https://dangitgit.com/">https://dangitgit.com/</a>

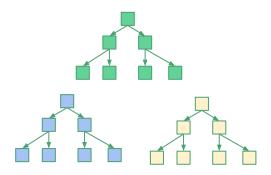
# Learning from the Machines

### **Ensemble Learning**

"Random decision forests correct for decision trees' habit of overfitting to their training set" [1]



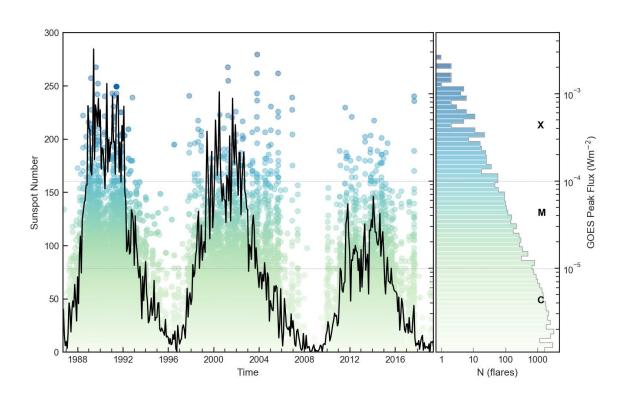
A Decision Tree (You)



A Random Forest (You + Collaborators!)

[1] "The elements of statistical learning." Friedman, Jerome, Trevor Hastie, and Robert Tibshirani.

### Twitter?



### Twitter!

