Data Training Skills List

**Google Sheet Skills:**

* How to import data, the difference between different file formats, when to use Excel versus Google Sheets
* Basics:
  + Searching
  + Sorting
  + Filtering
  + Freezing panes
  + Basic math like mean, median, sum, max, min and percentage change
    - Anchoring formulas with $
  + Cell and column formatting
    - Conditional formatting
* Pivot tables
* Cleaning data
  + Add/delete columns
  + Paste special
  + Transpose
  + Find and replace including wildcards
  + Formulas like trim and proper
  + Separating columns and pulling information from columns: left/right/mid
  + Date and time manipulation
* Vlookup to combine data or clean it
* If/then to categorize or clean data

**Other Skills:**

* Creating reproducible research, like recording your steps and how to check yourself
* Where to go for questions or help with data analysis
* Getting data out of a PDF with Cometdocs or Tabula
* Using spreadsheets to stay organized

**Data sets:**

* Questions to ask yourself when you open a new dataset
* Basic datasets every reporter should know like the Census and how to use them
* Datasets important to their beats
* What a data dictionary is and how to use it
* Common encoding like fips
* What scraping is and who to talk to; what you can do with programming
* Best practices when making your own dataset

**Using Data in Stories:**

* The seven types of data stories
* Using data for story discovery
* Checking your assumptions with numbers — what can be converted to numbers in your story?
* How data can be used in alternative story forms
* How to collaborate with Graphics editors
* Ethics and [dealing with bad data](https://github.com/Quartz/bad-data-guide)
  + Correlation does not equal causation
  + Cherry picking
  + Importance of context
  + Margin of error, adjusted vs not adjusted