

naming stuff*

foundations of geospatial analysis

2026.09.02

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**adapted from [naming things](#)*

three principles:

1. machine readable
2. human readable
3. plays well with default ordering

NO



myproject.aprx

Ian's Filenames Use Spaces and Punctuation.xlsx

figure 1.png

fig 2.png

JW7d^(2sl@deletethisandyourcareerisoverWx2*.csv

YES



2024-02-06_spangler-final-project.aprx

ians-filenames-are-getting-better.xlsx

fig01_scatterplot-talk-length-vs-interest.png

fig02_histogram-talk-attendance.png

1986-01-28_raw-data-from-challenger-o-rings.csv

machine readable

machine friendly:

- no spaces, punctuation, accents
- characters, case sensitivity

easy to compute on:

- deliberate use of delimiters

human readable

name contains info on content:

- connects to concept of a slug 🍌 from semantic URL
- slug = the last part of a URL - can be machine or human readable

how do you feel about this

<https://libguides.richmond.edu/geography>

and how about this

<https://researchguides.library.tufts.edu/c.php?g=789942&p=5654721>

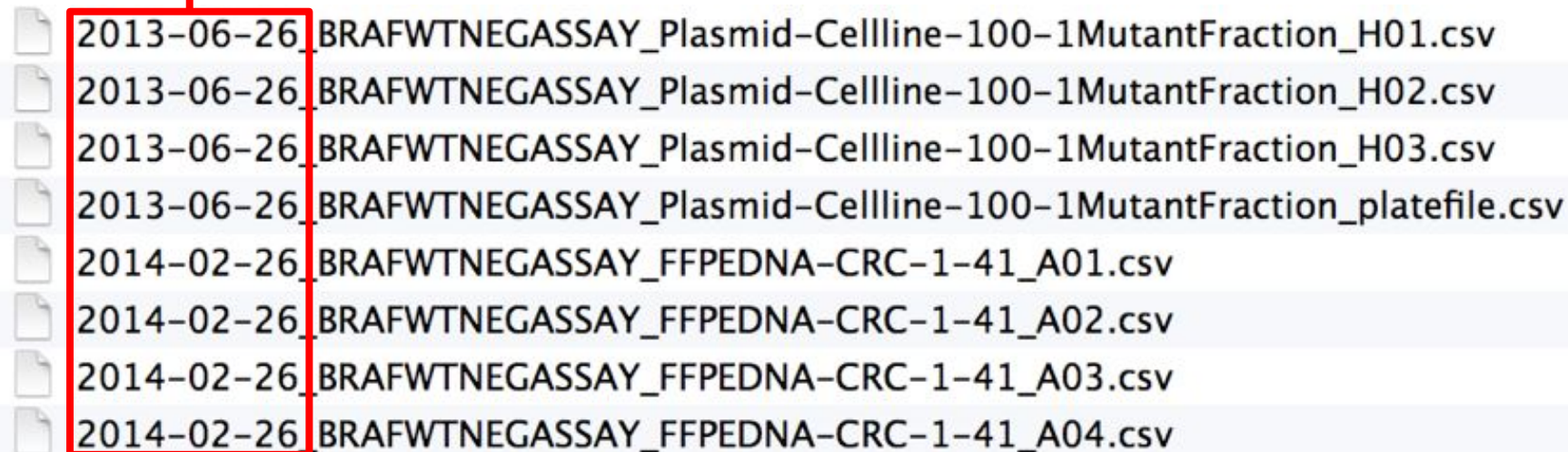
this applies to file names, too

why are these file names awesome?

-  2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H01.csv
-  2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H02.csv
-  2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H03.csv
-  2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_platefile.csv
-  2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A01.csv
-  2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A02.csv
-  2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A03.csv
-  2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A04.csv

plays well with default ordering

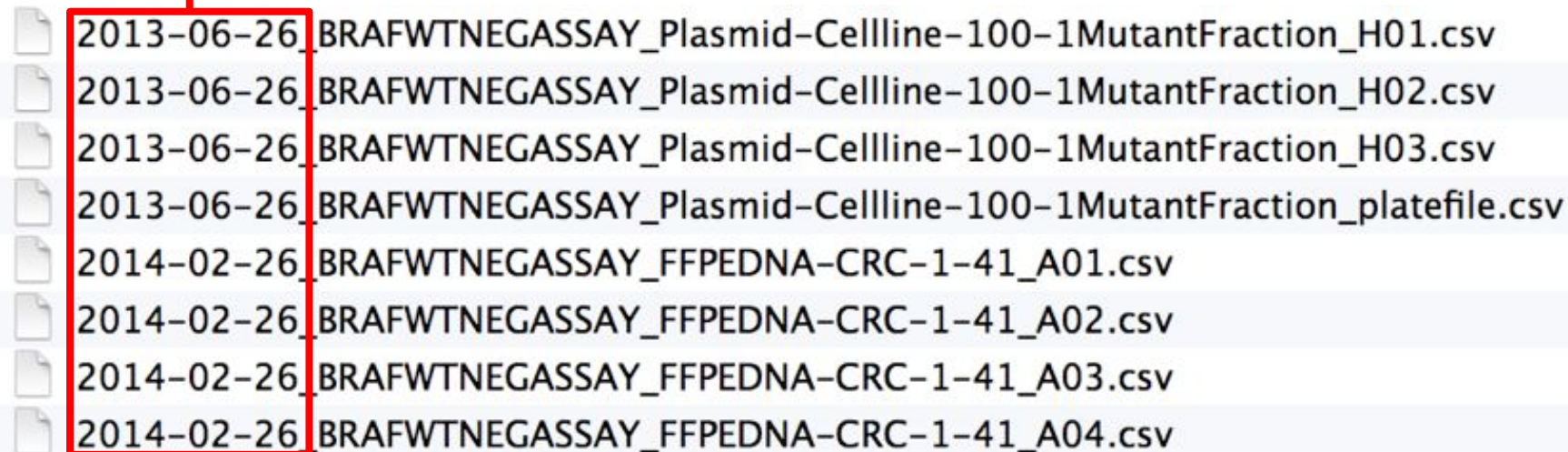
saving your files with a leading date will allow you to sort them naturally by date in the file explorer



2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H01.csv
2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H02.csv
2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H03.csv
2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_platefile.csv
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A01.csv
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A02.csv
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A03.csv
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A04.csv

plays well with default ordering

doesn't have to be ordered by date
could be 01, 02, 03, 04, etc.
whatever works for you

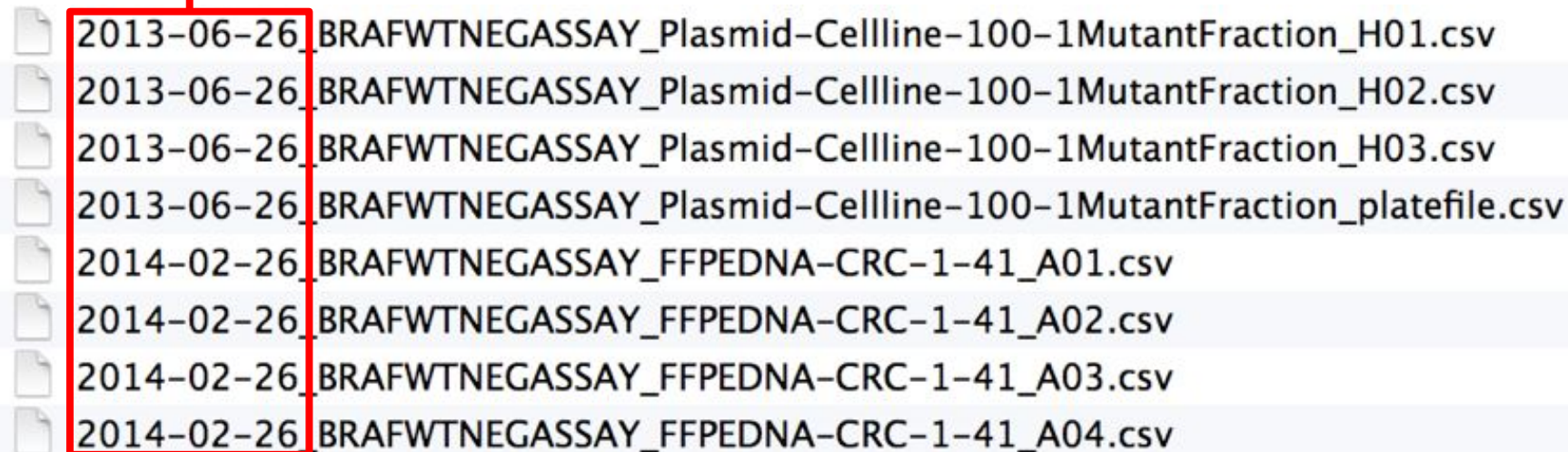


A list of CSV files is shown. The first four entries are grouped by a red box around their date portions (2013-06-26). A red line connects the text above to this box. The files are:

- 2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H01.csv
- 2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H02.csv
- 2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H03.csv
- 2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_platefile.csv
- 2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A01.csv
- 2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A02.csv
- 2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A03.csv
- 2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A04.csv

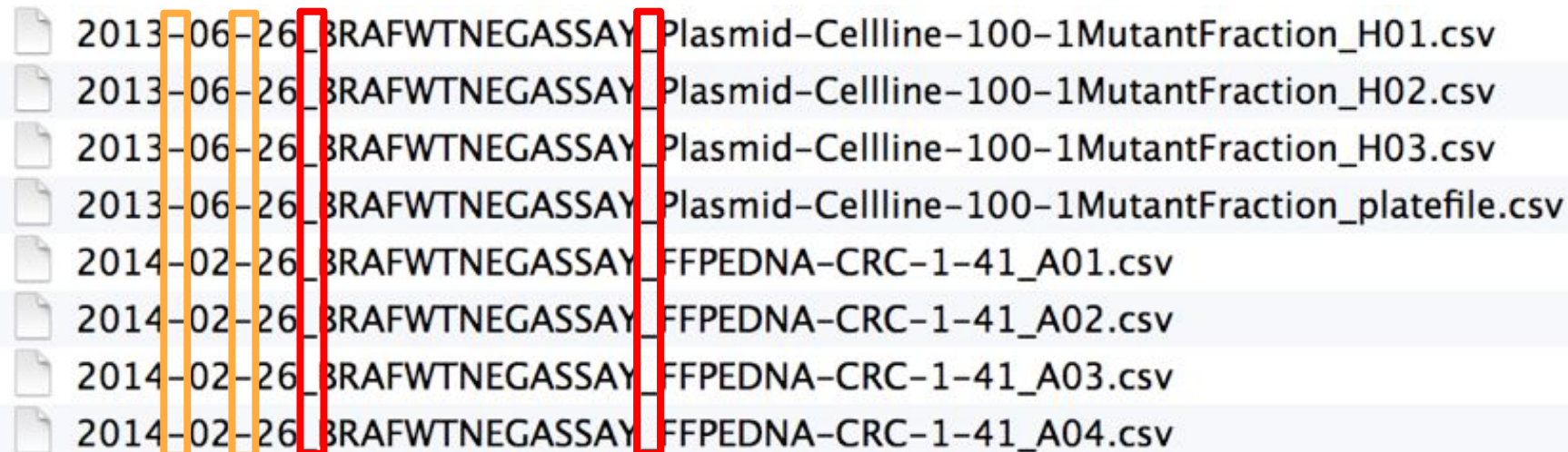
plays well with default ordering

being intentional about default ordering
makes data both machine
and human readable



2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H01.csv
2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H02.csv
2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H03.csv
2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_platefile.csv
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A01.csv
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A02.csv
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A03.csv
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A04.csv

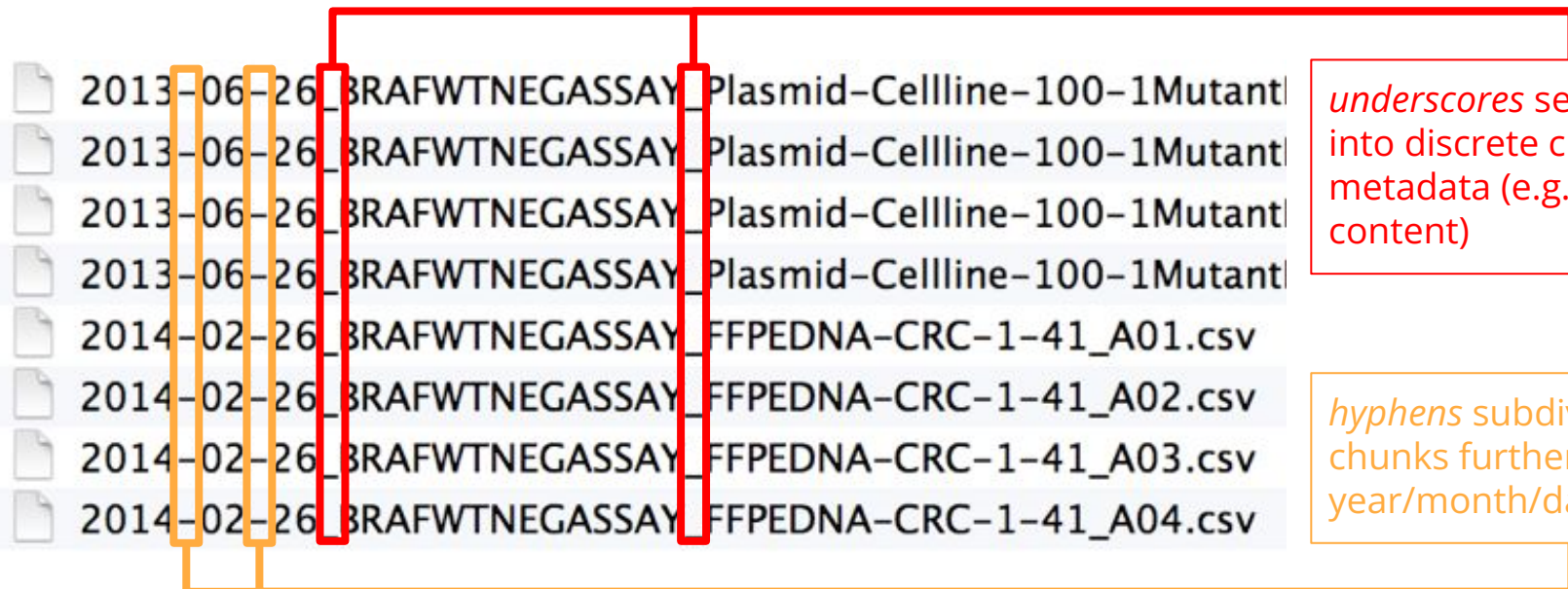
with deliberate use of “_” and “-”...



The image shows a list of eight CSV files. The first four files are grouped by a light blue background, and the last four are grouped by a light purple background. Two vertical orange boxes highlight the underscores in the date '2013-06-26' of the first four files. Two vertical red boxes highlight the hyphens in the assay name 'BRAFWTNEGASSAY' of the first four files. The file names are as follows:

- 2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H01.csv
- 2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H02.csv
- 2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H03.csv
- 2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_platefile.csv
- 2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A01.csv
- 2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A02.csv
- 2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A03.csv
- 2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A04.csv

... we can get metadata from filenames



The diagram illustrates how file names are structured with metadata. It shows a list of eight file names. The first four files have the same name: '2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1Mutant'. The last four files have a different name: '2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A01.csv' through 'A04.csv'. Two orange vertical boxes highlight the date '2013-06-26' in the first four files and '2014-02-26' in the last four files. Two red vertical boxes highlight the assay type 'BRAFWTNEGASSAY' in the first four files and 'BRAFWTNEGASSAY' in the last four files. A red horizontal line connects the top of the red boxes, and an orange horizontal line connects the bottom of the orange boxes. A red line also connects the top of the red boxes to a red box on the right. An orange line also connects the bottom of the orange boxes to an orange box on the right.

2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1Mutant
2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1Mutant
2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1Mutant
2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1Mutant
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A01.csv
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A02.csv
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A03.csv
2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A04.csv

underscores separate the file into discrete chunks of metadata (e.g., date, content)

hyphens subdivide those chunks further (e.g., date > year/month/day)

and the names also have meaning. nice!

	2013-06-26_BRAFWTNEGASSAY	Plasmid-Cellline-100-1MutantFraction_H01.csv
	2013-06-26_BRAFWTNEGASSAY	Plasmid-Cellline-100-1MutantFraction_H02.csv
	2013-06-26_BRAFWTNEGASSAY	Plasmid-Cellline-100-1MutantFraction_H03.csv
	2013-06-26_BRAFWTNEGASSAY	Plasmid-Cellline-100-1MutantFraction_platefile.csv
	2014-02-26_BRAFWTNEGASSAY	FFPEDNA-CRC-1-41_A01.csv
	2014-02-26_BRAFWTNEGASSAY	FFPEDNA-CRC-1-41_A02.csv
	2014-02-26_BRAFWTNEGASSAY	FFPEDNA-CRC-1-41_A03.csv
	2014-02-26_BRAFWTNEGASSAY	FFPEDNA-CRC-1-41_A04.csv

**come up with a system
that works for you**

underscores = logical breaks in topic
hyphens = spaces

**do it sooner than
later**

it will pay dividends

**“but are there any rules for
naming things in arcgis pro,
specifically?”**

yes. yes there are.

three rules, in fact!

rule #1

thou shalt not use
special characters,
hyphens, or
spaces



rule #2

thou shalt not start
thy filenames with
a number or an
underscore



rule #3

thou shalt adhere to
character limits in
thy geodatabases
and shapefiles

shapefiles

- field name length: 10 characters!
- total # of fields: ~255

geodatabases

- feature dataset name: 160 characters
- feature class/table name: 160 characters

**here is a good
story map about
naming files in
arcgis**



How to name files

Jennifer Bryan