naming stuff*

foundations of geospatial analysis

2026.09.02

naming stuff*

foundations of geospatial analysis

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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

2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H01.csv
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2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_H03.csv
2013-06-26_BRAFWTNEGASSAY_Plasmid-Cellline-100-1MutantFraction_platefile.csv
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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

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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 “-”...

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2014-02-26_BRAFWTNEGASSAY_FFPEDNA-CRC-1-41_A04.csv

… we can get metadata from filenames

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
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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
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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

norm
Conf
How to name files
Jennifer Bryan