

Computational Fluency Workshop

File paths and directory organization

Jason Ritt

jason_ritt@brown.edu

Scientific Director of Quantitative Neuroscience

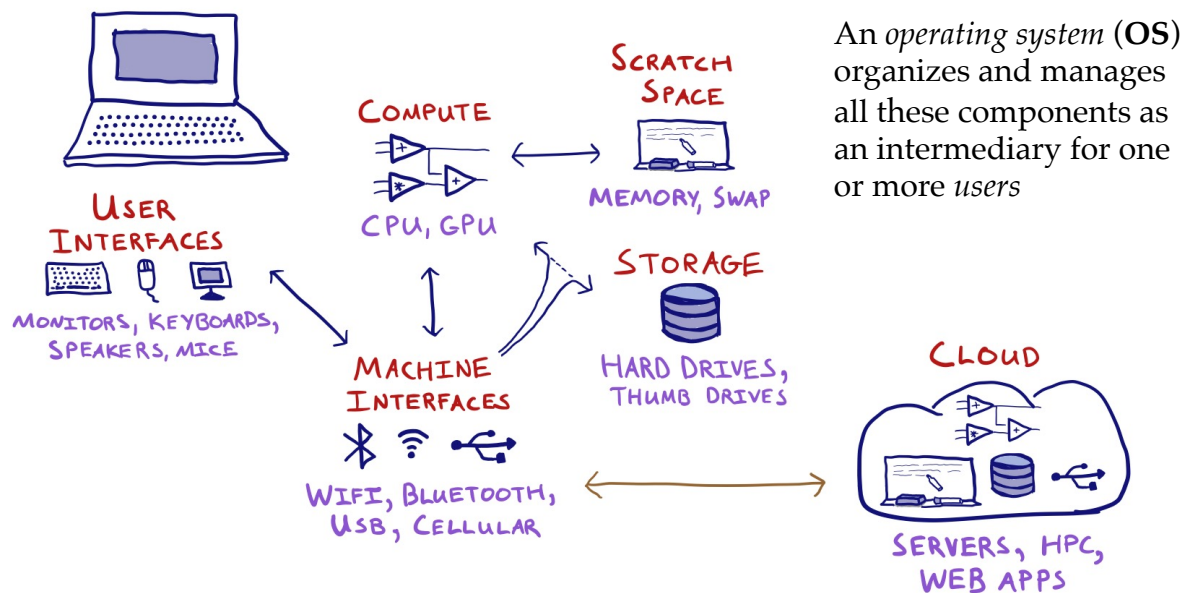


ROBERT J. & NANCY D. CARNEY
INSTITUTE FOR BRAIN SCIENCE
BROWN UNIVERSITY

<https://github.com/brownridd/cfsc2024>

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The core (conceptual) components of computers



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Dude, where's my data? (and also my code, and my messages, and ...)



Storage is organized by the OS: Information is kept in *files*. Every file is located in some *directory*, within a *tree* of other directories.

Locations are described by *paths*:

`/Users/jritt/Code/EM_event_detection/EM_algorithm_demo.ipynb`

Diagram labels for the path above:

- `/`: root directory
- `Users/jritt/Code/EM_event_detection/`: subdirectories
- `EM_algorithm_demo`: filename
- `.ipynb`: file type extension

Remote locations (URLs) include networking information:

`https://gitlab.com/fleischmann-lab/calcium-imaging/em-event-detection-demo/-/blob/master/EM_algorithm_demo.ipynb`

Diagram labels for the URL above:

- `https://`: protocol
- `gitlab.com`: domain name (the "server")
- `/fleischmann-lab/calcium-imaging/em-event-detection-demo/-/blob/master/EM_algorithm_demo.ipynb`: Note: these are not always "real" files or directories on the remote OS

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Absolute and relative paths each have their place



Every process runs in some *working directory*. A **relative path** starts from this working directory; an **absolute path** starts from the top of the filesystem tree.

An absolute path :

`/Users/jritt/Code/EM_event_detection/EM_algorithm_demo.ipynb`

From my *home directory* `jritt/` :

`Code/EM_event_detection/EM_algorithm_demo.ipynb`

From `EM_event_detection/` :

`./EM_algorithm_demo.ipynb` or just `EM_algorithm_demo.ipynb`

`./` means "this directory" `~/` means "my home directory"
`../` means "go up one directory"

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