



Design Strategy

JupyterLab FS

Product/Feature Vision

Circumstances of Use

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Product/Feature Vision

Jupyter's (goal) place in the market + How the file system supports this goal

JupyterLab is a uniquely positioned tool that is built on the idea of combining code and prose into a single living document. The file system must enable users to efficiently locate their required files, reliably connect to data sources, seamlessly organize working documents, and effectively manage project lifecycles.

Circumstances of Use

Who, What, When, Where, Why, How

Who	Data scientists, Students, Developers, Researchers, Hobbyists
What	Locate, Connect, Organize, & Manage files for JLab consumption/analysis
When	Working, exploring, examining, sharing
Where	Launcher & file browser; Quick actions & workspace; context menu
Why	Bring in data to manipulate, share, and analyze
How	Start project > Open required files & Code base > Do work > Save <u>Or</u> Resume project > Open required files & Code base > Do work > Save <u>Or</u> Locate & open code base (file) > Connect to database > Do work > Save

Design Prompt

Design a file browser UI for JupyterLab that is recognizable, easily navigable, and offers the user transparency into where their files are located. The design should primarily support location and organization of one's files. Seamless connectivity to other sources and data, and collaboration with peers and the community should also be considered, but are secondary to the location and organization of files.

Design Criteria

Basic, feature-specific standards the design must meet

1. **Where am I:** A file's location should be readily apparent.
2. **The right tools:** Users should be given basic file management features and tools.
3. **The right place:** Coherent IA optimized around one-click actions, nested actions, right-click actions.
4. **Just in time:** Visual cues should occur as needed, and exactly when an action occurs.

User Stories

Finding a File

- As a user, I want to **easily view the directory** I am currently in, so that I know where I am.
- As a user, I want to **easily view all of my other directories**, so that I can decide whether to navigate to them.
- As a user, I want **the ability to see a file's full location**, so that I can ensure it is the correct file.

- As a user, I want to **preview a file**, so that I do not waste time working with the wrong file.
- As a user, I want to **open a file**, so that I can begin a project.
- As an intermediate user, I want to **locate a few files**, so that I can set up my project space.
- As an expert user, I want to **locate (but not open) several files**, so that I can have them accessible while I work.
- As an expert user, I want to **know that I am working on the most up-to-date file**, so that my work is valid and reproducible.

Organizing Files

- As a user, I want to **edit a file name**, so that I can locate this file later.
- As an intermediate user, I want to **move some files to a new directory**, so that my work stays organized.
- As an intermediate user, I want to **group files together** to create a project space.
- As an intermediate user, I want to **sort and filter my files**, so that I do not clutter my file browser with files I do not need.
- As an intermediate user, I want to **export a file**, so that I can share it with my peers.
- As an expert user, I want to **view a file's history**, so that I can identify what changes have been made.
- As an expert user, I want to **ensure that all the files I used are properly grouped**, so that I may hand this project off to a peer.
- As an expert user, I want to **alter the permissions for a file**, so that my subordinate can access it.

Design Targets

1. **M.V.P. Clickable Prototype:** Our project end-goal is to provide a clickable prototype that addresses two primary pain points – locating and organizing files.
 - a. Lo-fi clickable wireframes
 - b. Hi-Fi Prototype
2. **Recommended Next Steps:** Our supporting research and preliminary design artifacts for future-facing concepts will be placed in a next-steps document, which will be given to the Jupyter team for use at their discretion.