


Deliverables: 30 October 2017

AVATR

Sprint 1 DoDs

- DoD: Explore the current landscape
  - We have many Tech Evals and notes on the landscape, and decided on what to use
- DoD: Capability to upload and store annotations
  - FIJI + gen_commands + ingest_large_vol, stores annotation images in the boss
- DoD: Capability to pull/upload data from the boss
  - Modified NDR pulls data from boss, organizes into folders, and preps for upload
- DoD: Basic unsupervised methods
  - No implementation that runs an algorithm on data (we just got one?). Next week make a plugin?
- DoD: View labels
  - We can load the labels in NeuroGlancer/NDVIS from NDWT link, but can't see
- DoD: DOCUMENTATION
  - We are writing a lot of documentation

Sprint	Due Date	Requirements

Sprint 1	11/10	• **Exploration into current landscape:**
		  ◦ OpenNeuro, Clowdr, Boutique, AWS, NDWebtools
		• Data Ingest Plugin
		  ◦ Capability to upload and store annotations
		  ◦ Capability to pull/upload data from boss
		• Analysis Plugin
		  ◦ Basic unsupervised methods
		• NDVis Visualization Plugin
		  ◦ Can view labels
		• DOCUMENTATION!

This Week:

- Make Documentation for ingest_large_vol ☑
  - Rewrote a lot of the pipeline based on feedback ☑
- Get feedback on pipeline ☑
- Demo of ingest_large_vol in BOSS ☑
- Demo for NDM (rip)
- Tech Eval for COINS/LORIS ☑

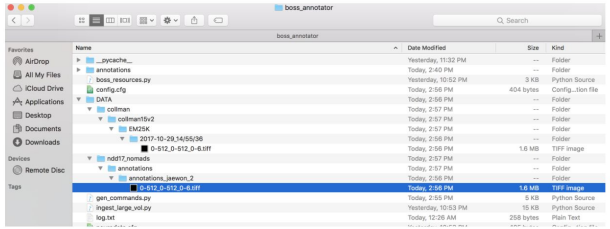
Annotation Workflow Feedback

- Hackathon feedback:
  - Doing stuff with their own collections?
    - Added stuff in documentation
      - LINE 80 IN INGEST_LARGE_VOL.PY
  - Part still not documented is with setting up annotation channels and the bugs along with it
    - Talk to Ben maybe
- Annotation squad:
  - INGEST_LARGE_VOL on next slide
  - Big point - saving the FIJI annotations as XML lets them pick up where they left off

Updated docs: ingest_large_vol + DEMO

NOTE: At any point, you can export your annotations as an xml by the same method listed above. Opening the xml file will start you where you left off.

k. A black screen will appear - these are your annotations, don't worry if you can't see them.
l. Save your annotations in the correct directory *with the same name*, an example given below.



7. To push annotations to the BOSS, run `gen_commands.py`.
8. Paste command line output into terminal. If this doesn't work, you will probably have to change some parameters in `gen_commands.py`. Below is a list of all parameters:

Parameters

Parameters	Description	Required	Tips and Examples
script	Path to ingest_large_vol.py script	Yes	Should not have to change.
source_type	Where the data is being ingested from	Yes	Either `s3` or `local`.
s3_bucket_name	AWS S3 Bucket	No	Only specify if

Feedback:
http://neurodata-annotator.readthedocs.io/en/latest/

- Annotators didn't like editing python code
- There wasn't documentation for people using different data who ran into other problems
- Including NDWebTools parts in documentation will help

Demo:

- It looks like uint64 stuff doesn't work at all. So we just push annotations as uint8 since FIJI saves them like that.
- NDVis downsampling being weird

Continued Issues with NeuroDataManager

- I think the documentation isn't exactly clear on what needs to be done in order to run DataManager. I think that:
  - I need to investigate the info manifest
  - Also structure the segmented directory? (does DM do this)?
-

```
(NDD) ____________________________________________________________________________
| ~/Envs/NDD/DataManager/build @ Bijans-MacBook-Pro (bijanvarjavand)
| => bin/ndm -datadir ../../avatr-f17s18/source/group/base_annotator/collman_collman15v2_EM25K/ -input ../../avatr-f17s18/source/group/
base_annotator/DATA/collman_collman15v2_0_520_0_520_0_16_EM25K.tif -x 520 -y 520 -z 16 -scale 0 -gzip
libc++abi.dylib: terminating with uncaught exception of type boost::exception_detail::clone_impl<boost::exception_detail::error_info_in
jector<boost::iostreams::gzip_error> >: gzip error: unspecified iostream_category error
*** Aborted at 1509214885 (unix time) try "date -d @1509214885" if you are using GNU date ***
PC: @     0x7fffba197d42 __pthread_kill
*** SIGABRT (@0x7fffba197d42) received by PID 26757 (TID 0x7fffc2f863c0) stack trace: ***
    @     0x7fffba278b3a _sigtramp
    @        0x4c2f6a240 (unknown)
    @     0x7fffba0fd420 abort
    @     0x7fffb8c5094a abort_message
    @     0x7fffb8c75c17 default_terminate_handler()
    @     0x7fffb9785713 _objc_terminate()
    @     0x7fffb8c72d49 std::__terminate()
    @     0x7fffb8c729d2 __cxa_rethrow
    @        0x10fe8845d BlockManager_namespace::FilesystemBlock::load()
    @        0x10fe78ae6 BlockManager_namespace::Block::add<>()
    @        0x10fe775a2 BlockManager_namespace::BlockManager::Put<>()
    @        0x10fe765d5 main
    @     0x7fffba069235 start
    @              0xe (unknown)
Abort trap: 6
```

For now using Boss is okay (since NDM not ready yet).

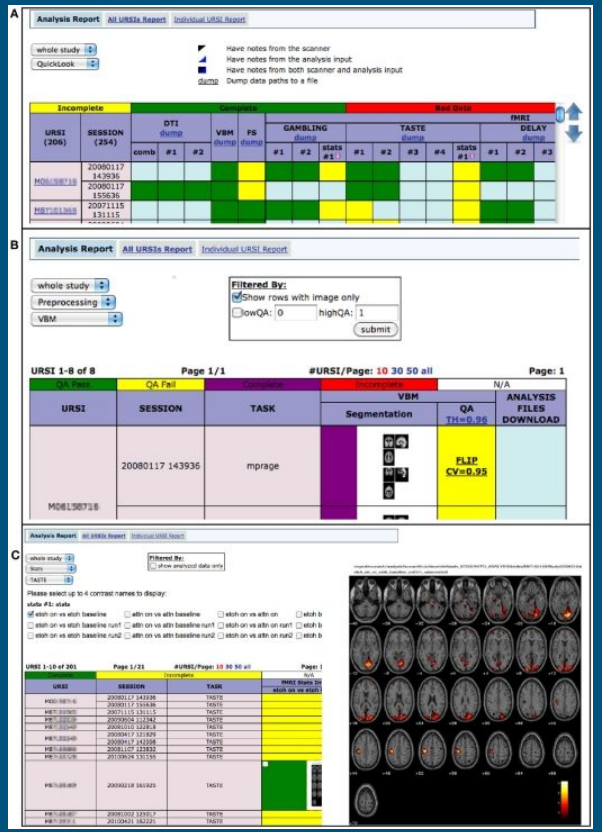
- For NDM, I'm trying to copy converts .tif files to a NeuroGlancer precomputed datastore (which should be able to work for S3 and Google Cloud).
  - A few issues I've run into which hopefully I can get ironed out by talking to Alex and Ben
  - Mostly just setting up my manifest and directory structure properly
- Cubes in boss have NeuroGlancer links, so we can view stuff with that for now. We can also pull stuff from that
  - Demo
- Why? (I spent too much time working on ingest_large_vol demo)

COINS is a cool LIMS with some features we need...

LIMS (Laboratory Information Management System) is software designed for data storage, exchange, tracking and workflows (pipelines).

What it has that we care about:

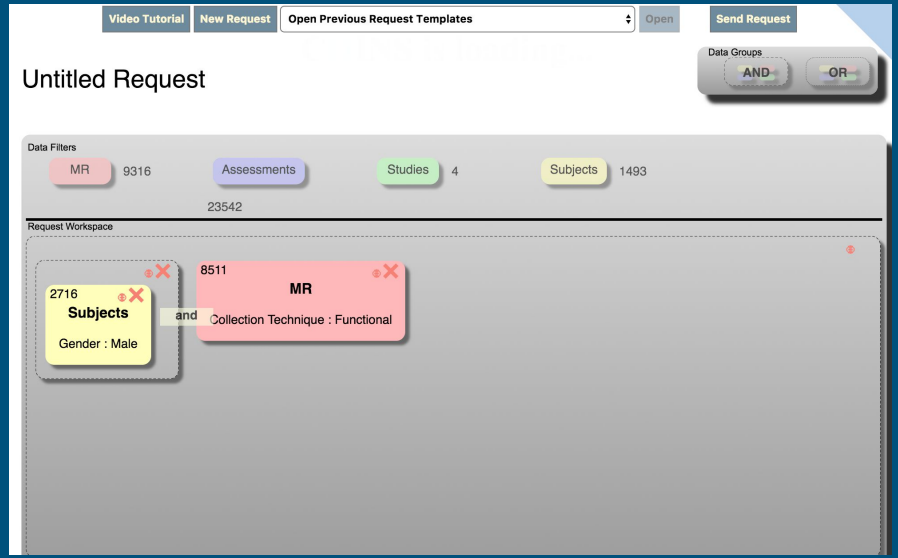
1. Data sharing and collaboration (Portal)
2. Data exporting and downloading (QB)
3. Data uploading (DICOM Receiver)
4. Dashboard for viewing analyses results
5. Logs data history



… but does not go well with what we need.

Cons for us:

- Only supports MRI, MEG, EEG scans and “clinical assessments”
  - So most of its features won’t work for NOMADS, Clarity
- Used mainly to protect patient privacy and data sharing permissions
- Made for doctors or clinical researchers, not data scientists.



For Next week:

Wednesday: Hopefully figure out DataManager stuff. Plan out LIMS based off of what we saw in COINS and OpenNeuro

- Make Documentation for in Sphinx
  - Using NDWebTools
  - Using NDM
- Demo of storing things in NeuroDataManager
  - Images
  - Annotations
  - Objects?
- Demo of a preliminary LIMS?