



# Sprint 1 Deliverables: 6 November 2017

AVATR

# Mission Statement

Make computational neuroscience more accessible by improving infrastructure tools involving data storage, analyses, and visualization.

# What infrastructure tools does NeuroData need?

We need:

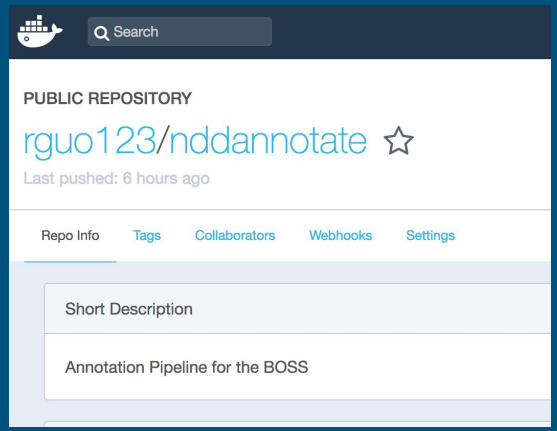
1. Easy upload and download of spatial data
2. Helpful visualizations of our annotations and data
3. A clear pipeline for generating manual annotations
4. A “plugin” system where people can run different pipelines on their data

# Existing infrastructures fail to meet our needs.

| Tool | Data Storage | Data Analyses | Data Visualization | Multiple Data Types | Comments |
|---|---|---|---|---|---|
| OpenNeuro | ✓ | ✓ | ✓ | ✗ | Only for public data |
| Clowdr | ✗ | ✓ | ✗ | ✓ | Not ready |
| NeuroData Manager | ✓ | ✗ | ✗ | ✓ | Doesn't really work? |
| COINS | ✓ | ✓ | ✓ | ✗ | For clinical purposes |

# Annotation pipeline solves a lot of our problems

- The current pipeline interfaces with the Boss much more cleanly, allowing for easy data uploads and downloads
- Data and annotation visualization is built in via NDVis
- Extras: plenty of documentation and dockerized for easy installation



# Overall Feedback on Annotation Workflow

- Hardest part is keeping track of the locations of the tif stacks
  - Make sure they have specific names and are in specific folders before you push
    - Config file tells you where stuff goes
  - Can save annotations from FIJI directly into the correct folder
- FIJI does a good job at annotating
- gen_commands being 1 command is better

- Still too much coding
  - Any terminal is too much terminal

# We Are Progressing Without Algorithms

- Focus of next sprint will be more on LIMS development

| | | |
|---|---|---|
| Sprint 1 | 11/6 | • Data Ingest Plugin<br>  ○ Capability to upload and store annotations<br>  ○ Capability to pull data from BOSS<br>• Analysis Plugin<br>  ○ Basic unsupervised methods<br>  ○ Run on cubes of data from BOSS and merge results together<br>  ○ Stores job metadata<br>• NDVis Visualization Plugin<br>  ○ Can view labels |
| Sprint 2 | 12/20<br>9-12 | • Refine Annotation workflow<br>  ○ What worked in sprint 1? What didn't?<br>• Develop intuitive UI sketch for LIMS through feedback with neuroscientists and teams<br>• End to end MVP of LIMS<br>• Thorough documentation (continue until end of year) |