

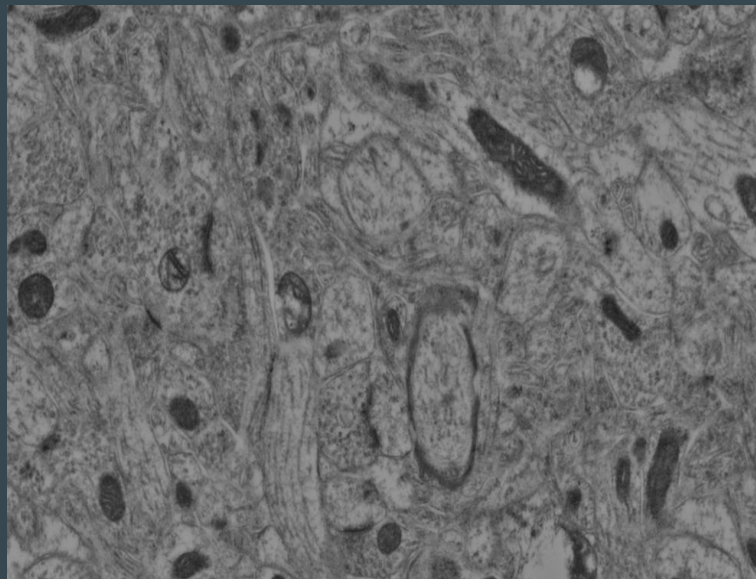
Deliverables: Oct 30, 2017

...

N.O.M.A.D.S

Goals

Project Goal: autonomously detect synapses using array tomography data.



Sprint 1 Goals

- MVP algorithm for synapse detection (unsupervised)
- Meaningful metric for evaluating label quality
- A standard workflow for generating labels
 - Given that data is on the local machine, what is the best way for someone without computer knowledge to annotate it?

Progress on Goals

Sprint 1 Goals:

- MVP algorithm for synapse detection (unsupervised) ✓
- Meaningful metric for evaluating label quality ✓
- A standard workflow for generating labels
 - @ AVATAR

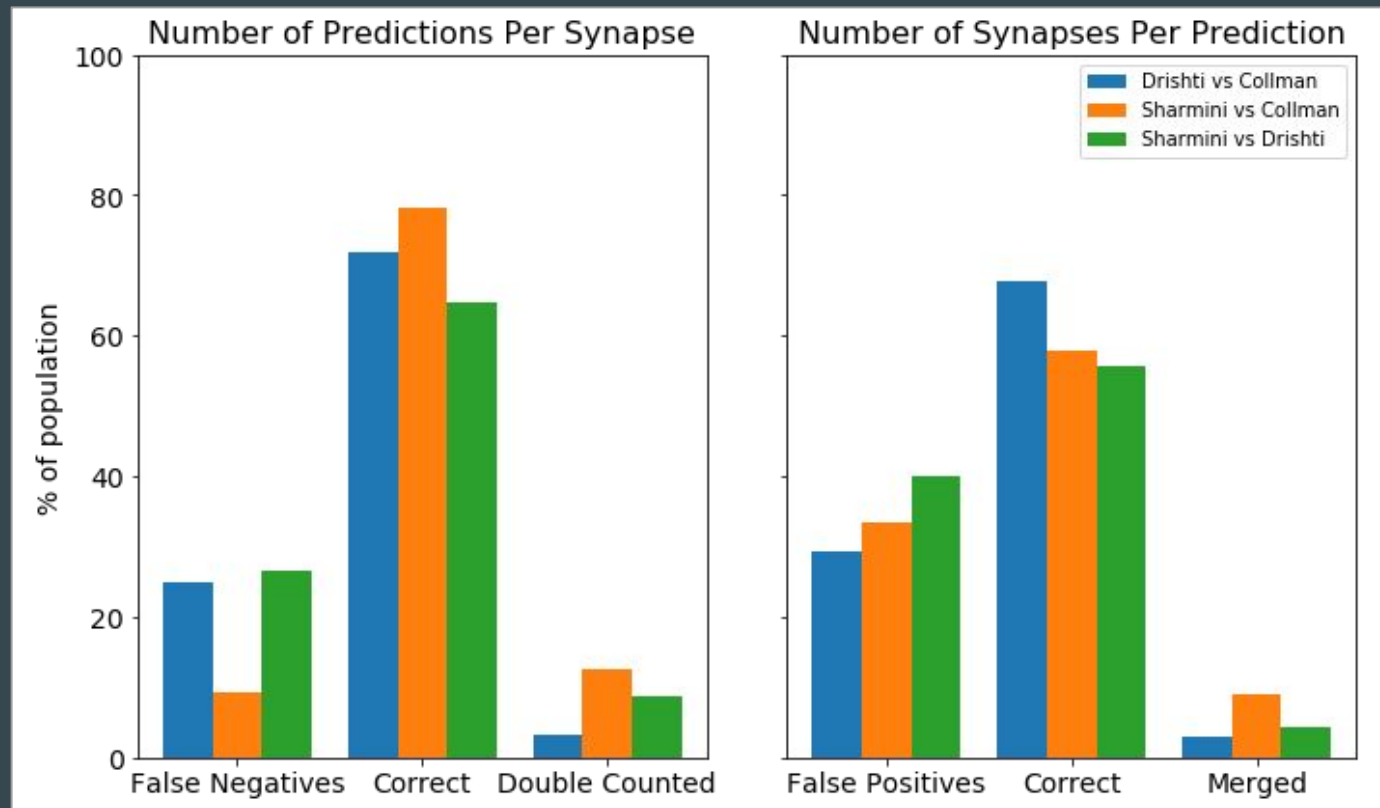
From Last Week

- Complete manual annotations and compare our performance
- Univariate LDA and QDA
- Classification of NMF and PCA components
- MVP unsupervised Pipeline

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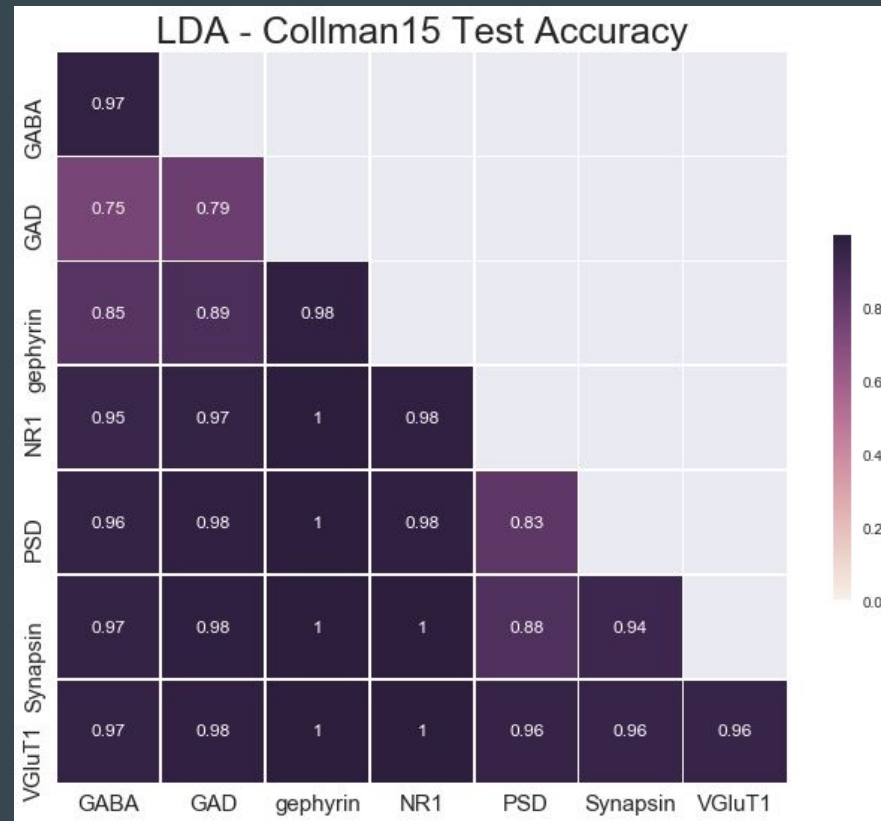
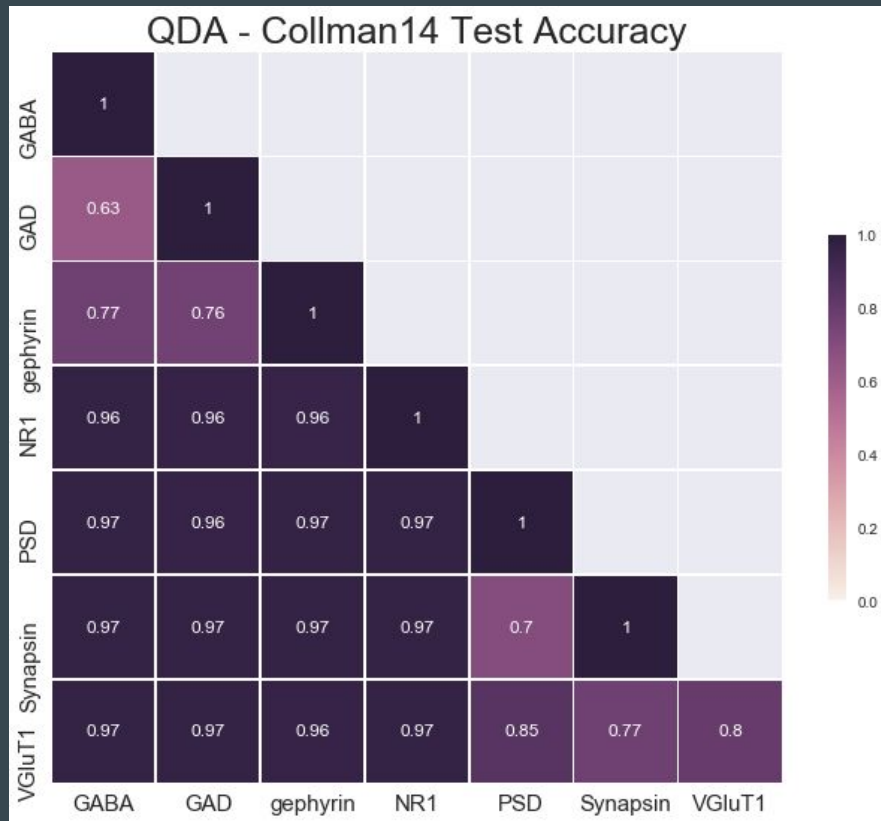
Quality metric of manual annotations



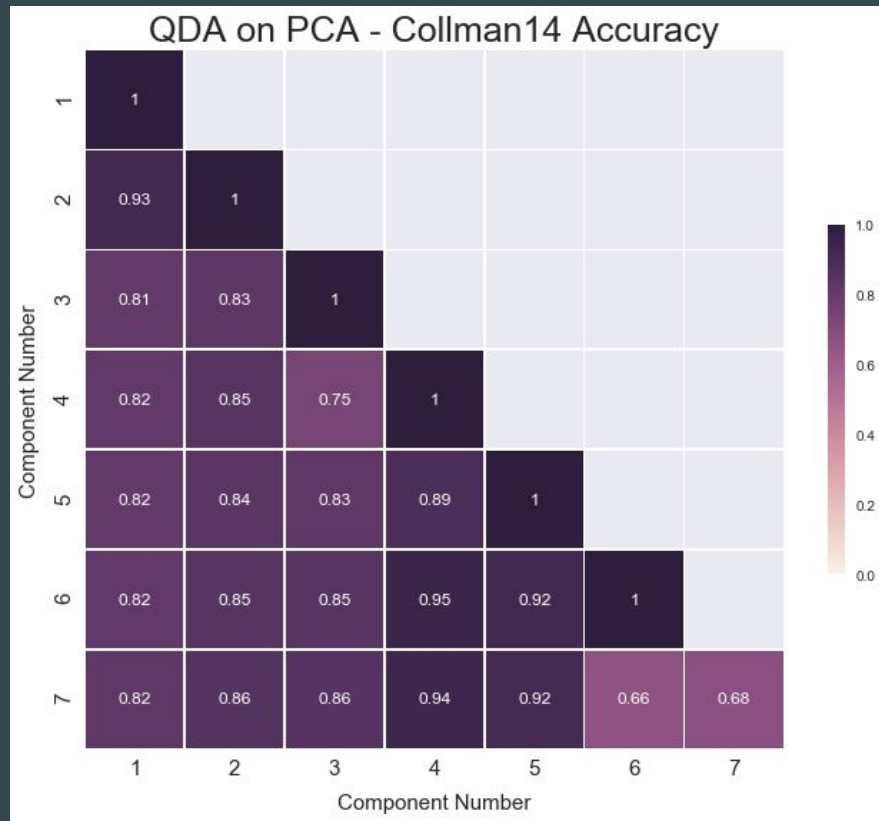
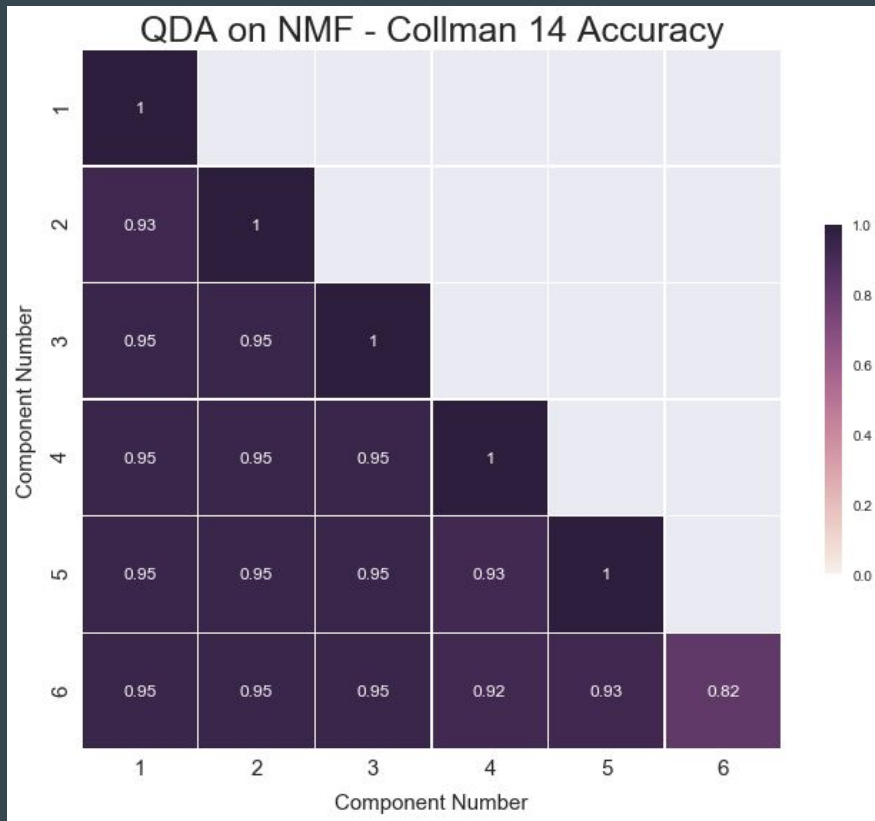
[Link](#)

Biomarkers can be classified by itself

[Link](#)

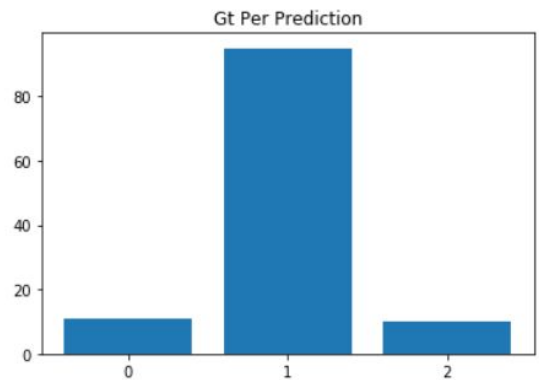
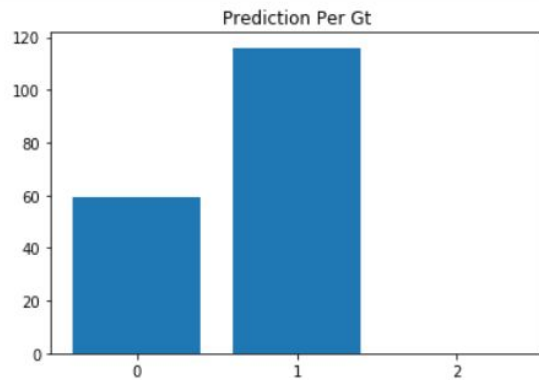


NMF and PCA components can also be classified using QDA



MVP Unsupervised Method is a Good Starting Point

- [Notebook](#)
- Pipeline Stats:
 - Precision: .9
 - Recall: .66



For Next Week

- Deploy Unsupervised Alg
 - Build Repo
 - Dockerize
 - Circle CI
- MOAR things