Your Science Question

Your Name

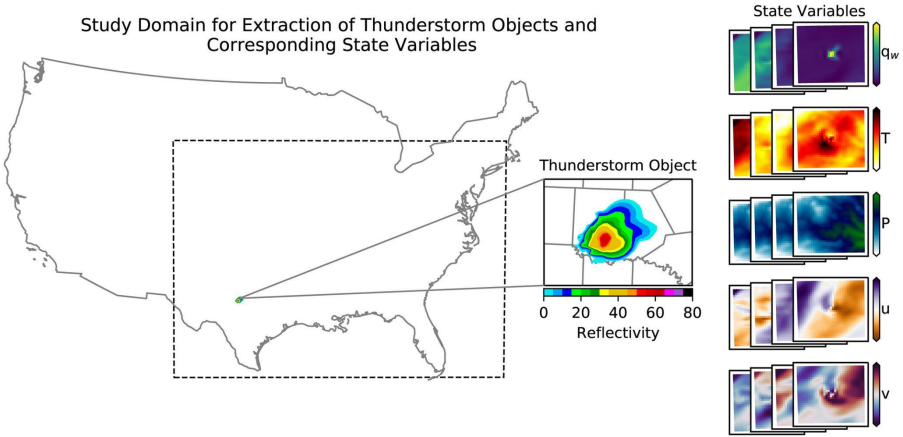
Presentation should be ~8 mins

Link to Jupyter Notebook for your project (HW#3)

Your dataset (~2 mins)

- In understandable words (for a technical audience that is not necessarily an expert in your specific domain), what dataset are you using?
- What are your inputs? How were they preprocessed and why?
- If you have labels, what are they and how were they preprocessed and why?
- Sample size and nature of data (e.g., time series, point data, etc.).
- Was any special treatment needed (e.g., class imbalance weights, data augmentation)?

Data figure(s) that help illustrate the nature of your data (e.g., spatial images, vectors, or time series) and input/labels (if you have labels) go here. Examples of viable options: image showing a sample, images showing steps in preprocessing workflow.



Citations; yada yada yada

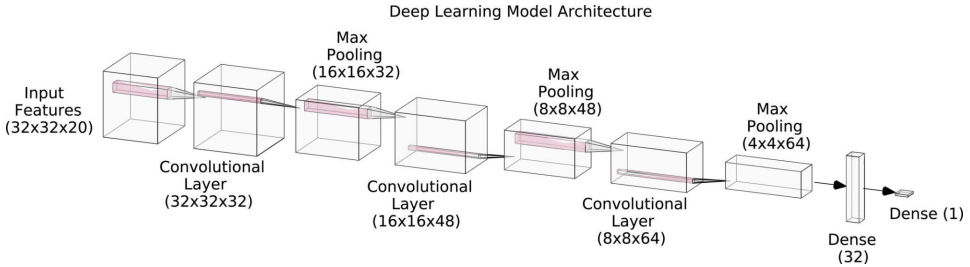
https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2020EA001490

Your neural network approach (~2 mins)

- In understandable words (for a technical audience that is not necessarily an expert in your specific domain), what are you doing to answer your science question?
- Supervised or unsupervised?
- Classification or regression?
- Your neural network type and architecture; and why? (e.g., number of layers, loss function, cross validation, learning rate, regularization, class weights).

Neural network figure goes here

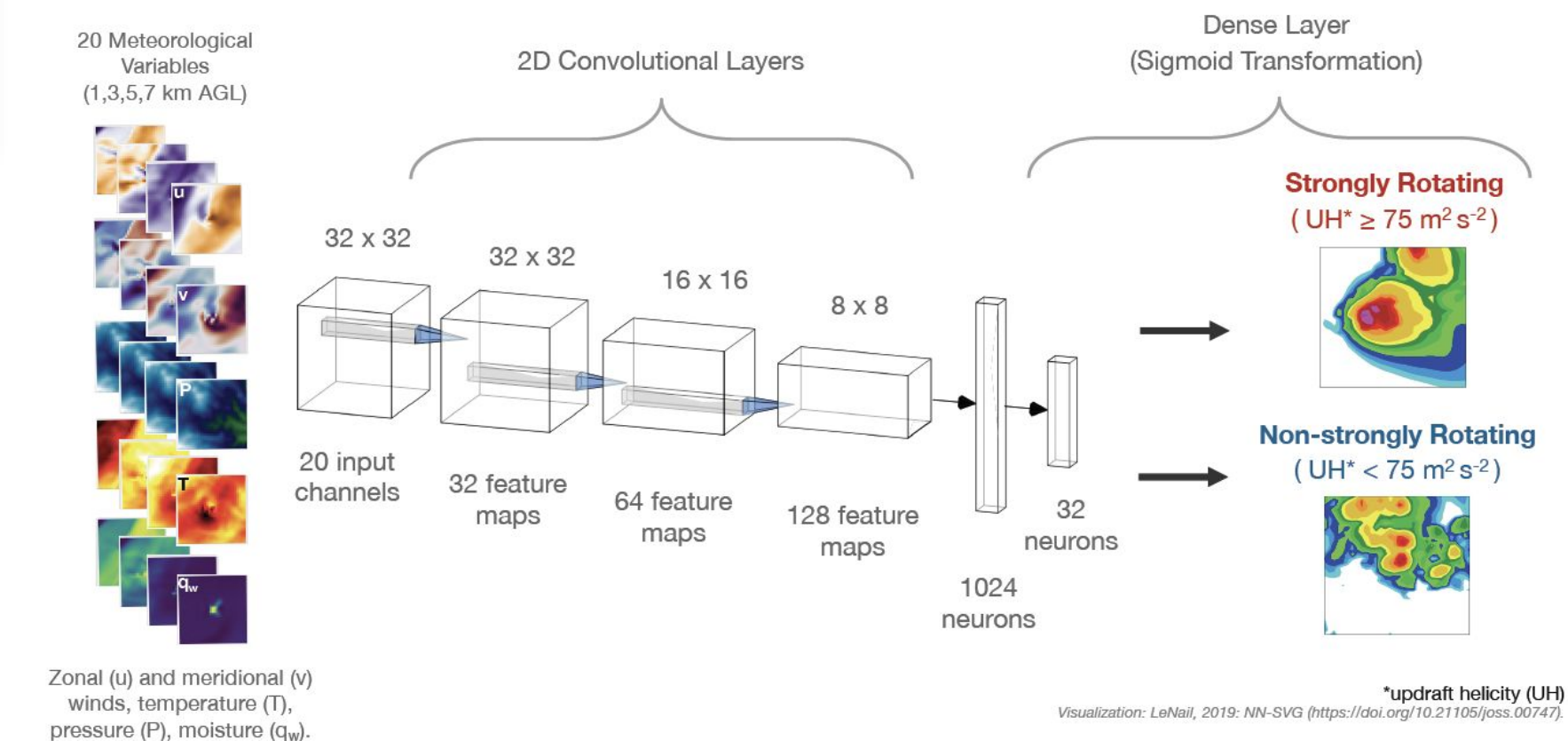
You can make an image of your NN using prebuilt tools, such as https://alexlenail.me/NN-SVG/



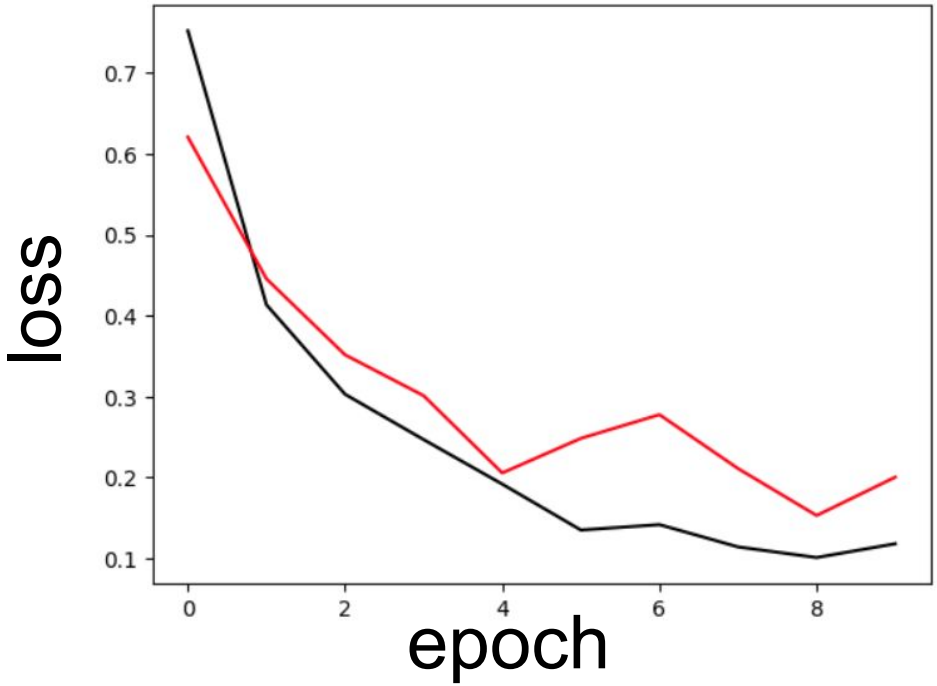
Citations; yada yada yada

https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2020EA001490

Summary figure of data going in and data coming out (~30 secs)



Training / validation as a function of epoch/loss figure (~30 secs)

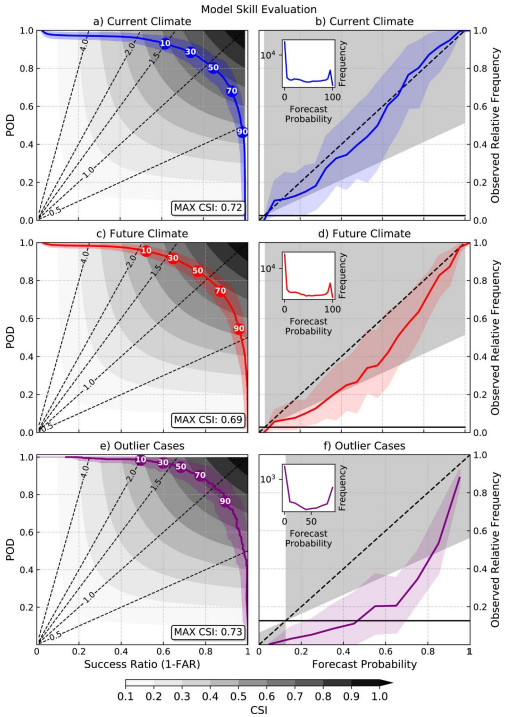


https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2020EA001490

Your results on your test data (~2 min)

- What evaluation metrics are you using?
- Explanation of your NN skill assessment (how are you making sure you are properly assessing skill of classification or regression, for unsupervised, are your clusters meaningful?).
- If results are good, why do you think? If results are bad, why do you think?

Figure(s) of your evaluation and results



https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2020EA001490

Future steps (end here)

- E.g., expanded hyperparameter grid search, more data, XAI, regularization, etc.
- How do you feel about neural networks after this exercise?