

# MTH 4320/5320 References

## Books

- Ian Goodfellow, Yoshua Bengio, and Aaron Courville. *Deep Learning*. MIT Press, 2016. <http://www.deeplearningbook.org>
- Michael Nielsen. *Neural Networks and Deep Learning*. Determination Press, 2015. <http://neuralnetworksanddeeplearning.com/>

## Papers

- Pedro Domingos. A few useful things to know about machine learning. *Communications of the ACM*, 55(10):78–87, oct 2012. doi: 10.1145/2347736.2347755. <https://homes.cs.washington.edu/~pedrod/papers/cacm12.pdf>

## Videos

- Grand Sanderson (3Blue1Brown). Deep Learning YouTube series (feedforward nets). [https://www.youtube.com/playlist?list=PLZHQ0bOWTQDNU6R1\\_67000Dx\\_ZCJB-3pi](https://www.youtube.com/playlist?list=PLZHQ0bOWTQDNU6R1_67000Dx_ZCJB-3pi)
- Andrew Ng. Machine Learning (Stanford course videos). [https://www.youtube.com/playlist?list=PLLssT5z\\_DsK-h9vYZkQkYNWcItqhlRJLN](https://www.youtube.com/playlist?list=PLLssT5z_DsK-h9vYZkQkYNWcItqhlRJLN)

## Websites

- CS231 Convolutional Neural Networks for Visual Recognition (notes from a Stanford course, their Module 1 is similar to parts of our course). <https://cs231n.github.io/>
- Chris Olah. colah’s blog (great visualizations for neural nets). <http://colah.github.io/>
- Distill (great visualizations for neural nets). <https://distill.pub/>
- Sebastian Ruder. An overview of gradient descent optimization algorithms. <https://ruder.io/optimizing-gradient-descent/>