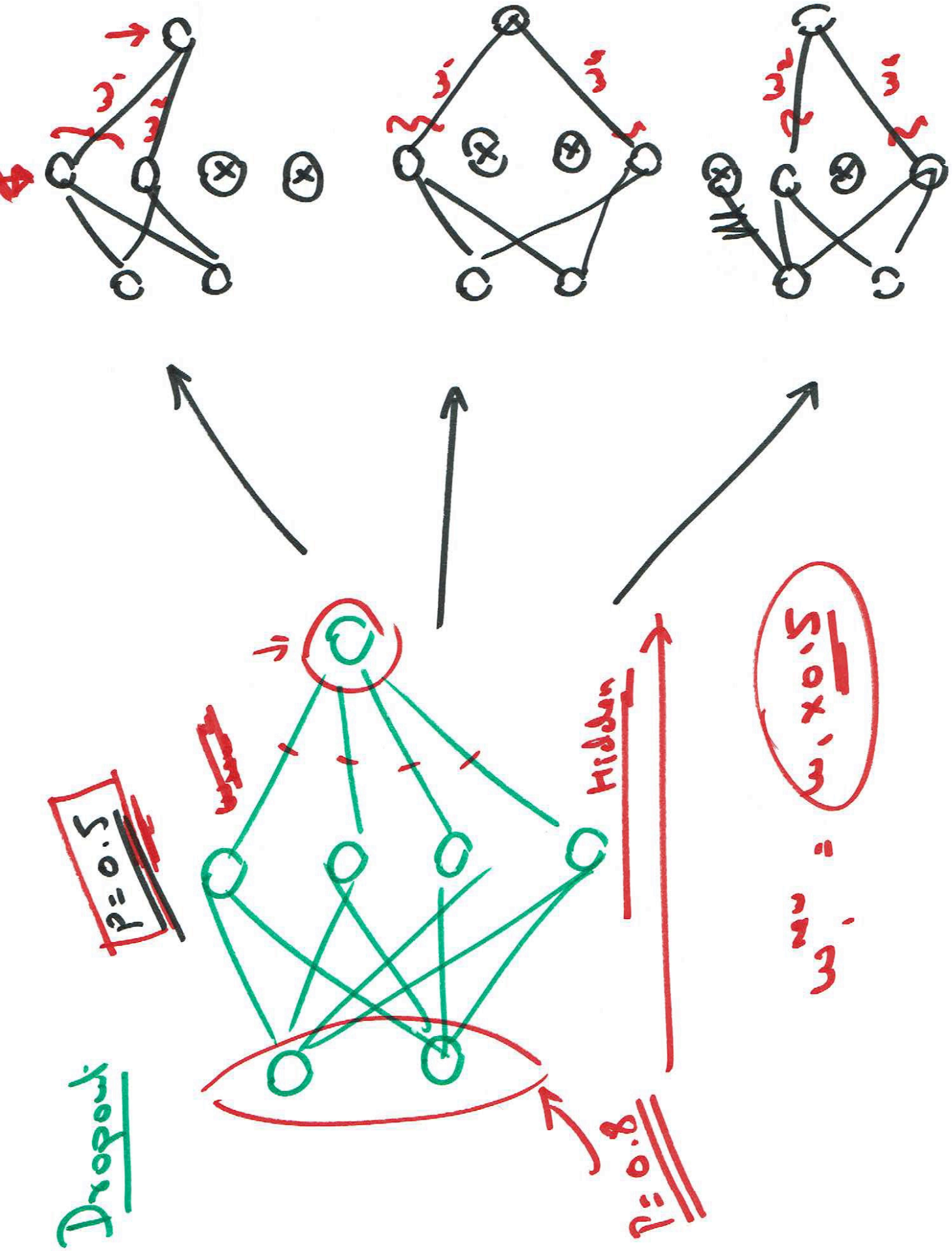

$$\hat{x}_i = \frac{x_i - \mu_i}{\sigma_i}$$

$$\begin{cases} \mu_{pop} = \Sigma\, \mu_{batch} \\ \sigma_{pop} = \Sigma\, \sigma_{batches} \end{cases}$$

A lot more details to talk about

- Activation functions
- Training
  - Loss functions
  - Back propagation
  - Gradient descent
- Other types of Neural Networks
- Overfitting and Regularization
- Neural Net Structures
  - Convolutional Neural Networks
- Deep Learning Networks (DNN)