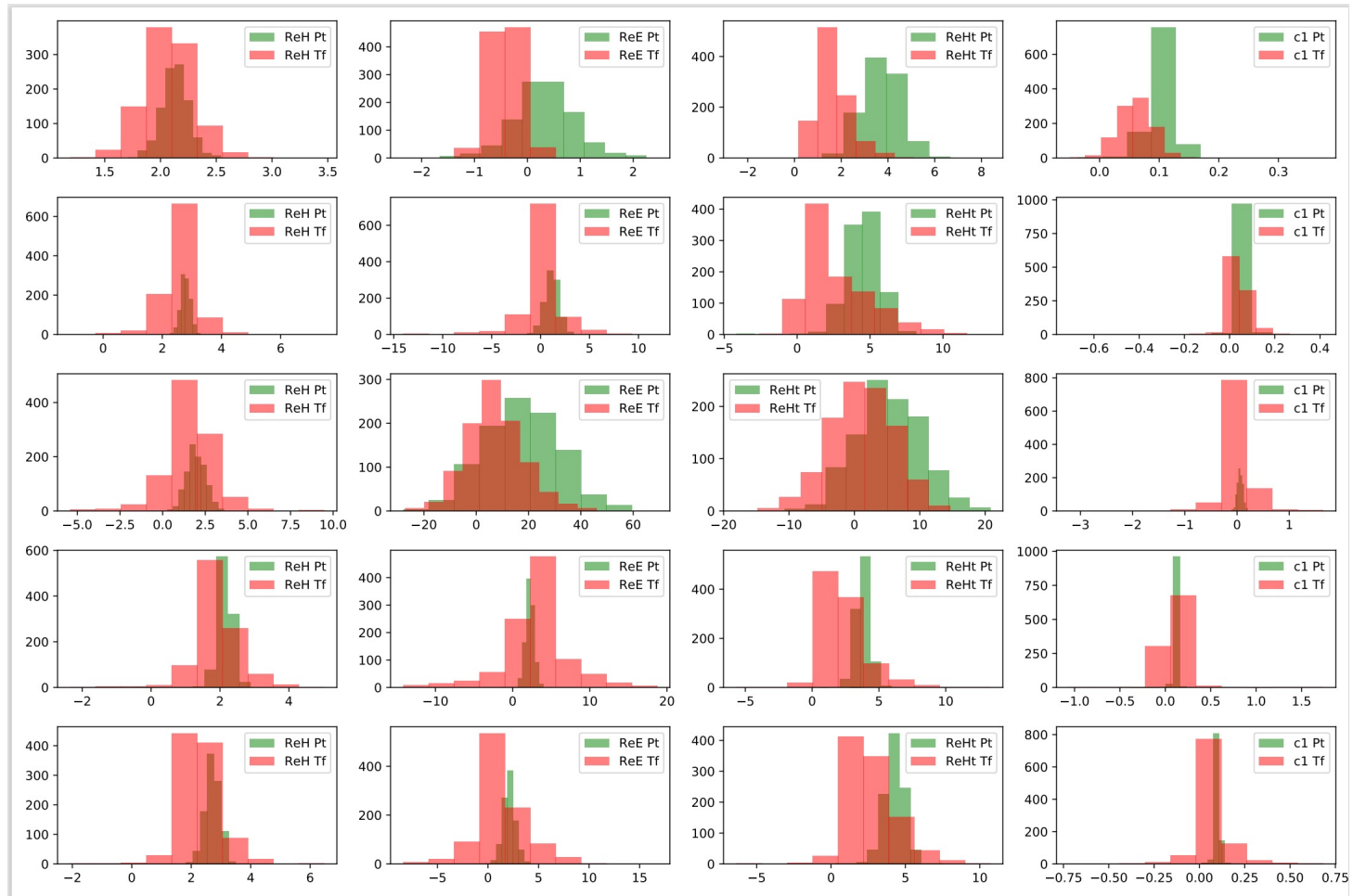


# PyTorch vs Tensorflow

BKM-Implementation Comparison

Cole Weis – 1/4/22

# Initial Comparison



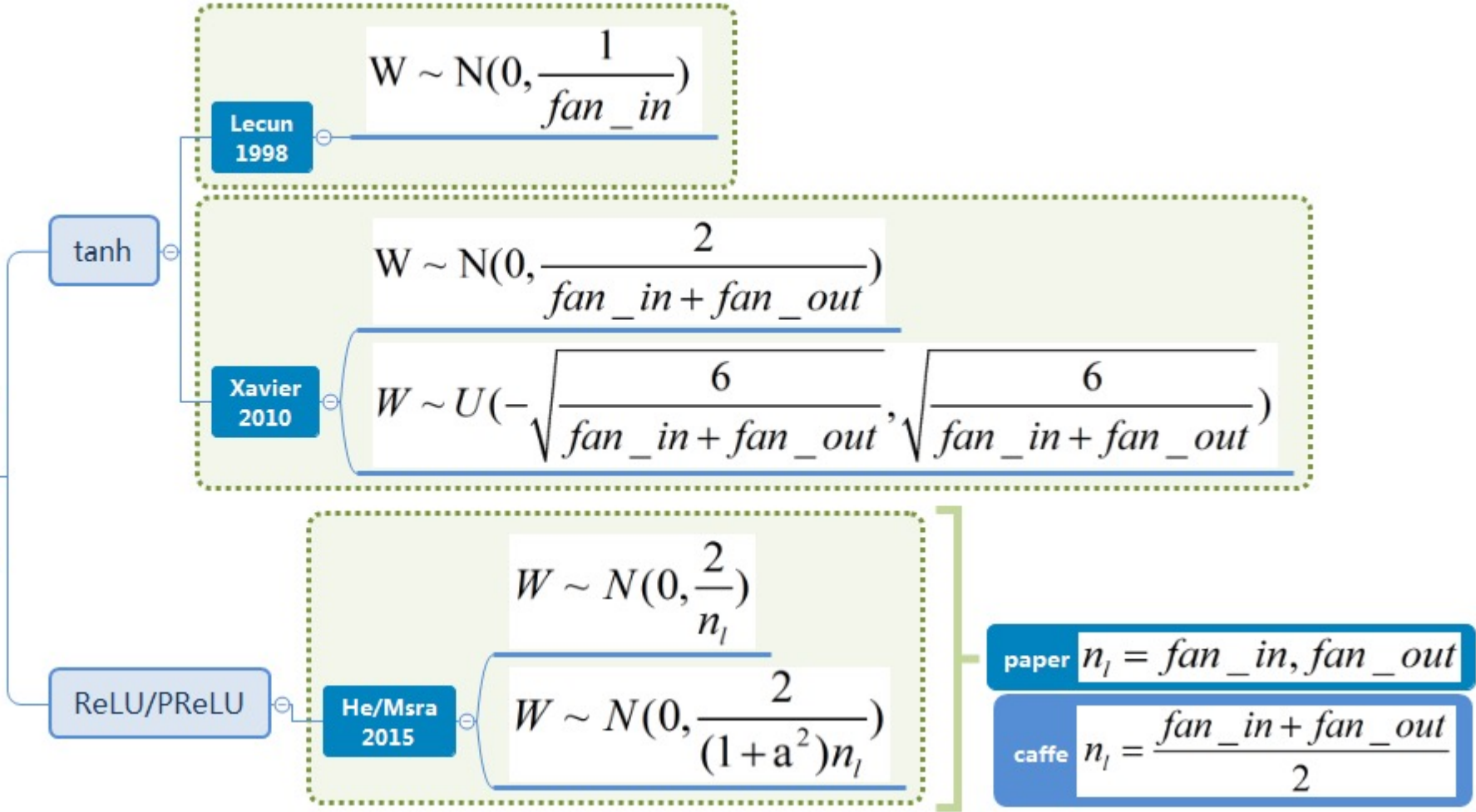
**Uniform Xavier initialization:** draw each weight,  $w$ , from a random uniform distribution

in  $[-x, x]$  for  $x = \sqrt{\frac{6}{inputs + outputs}}$

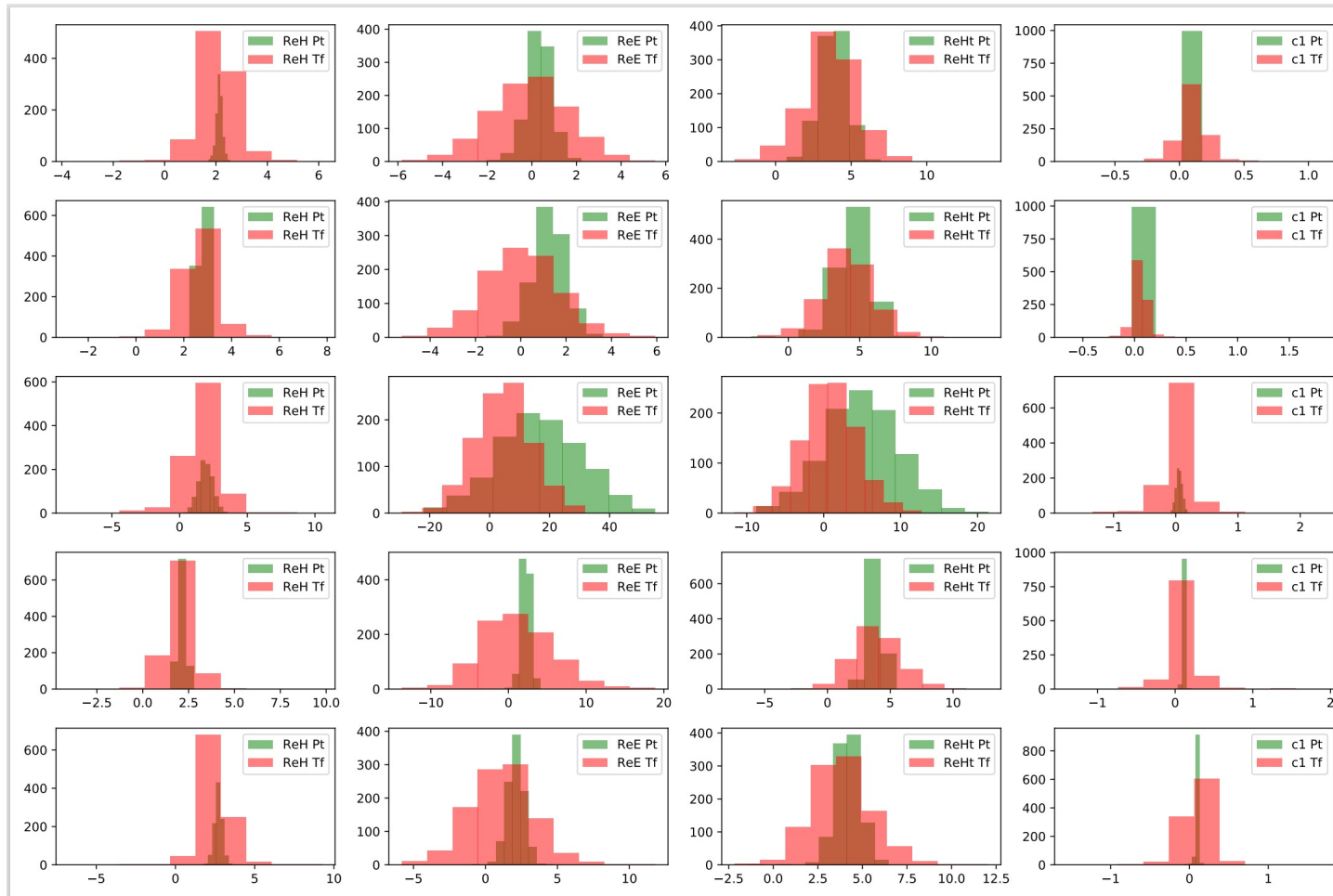
**Uniform He Initialization:**  
in  $[-x, x]$  for  $x =$

$$\sqrt{\frac{2}{dimension\ of\ previous\ layer}}$$

# weight initialization



# He Initialization Comparison



`tf.keras.optimizers.scheduler.ExponentialDecay`

`torch.optim.lr_scheduler.ExponentialLR`

