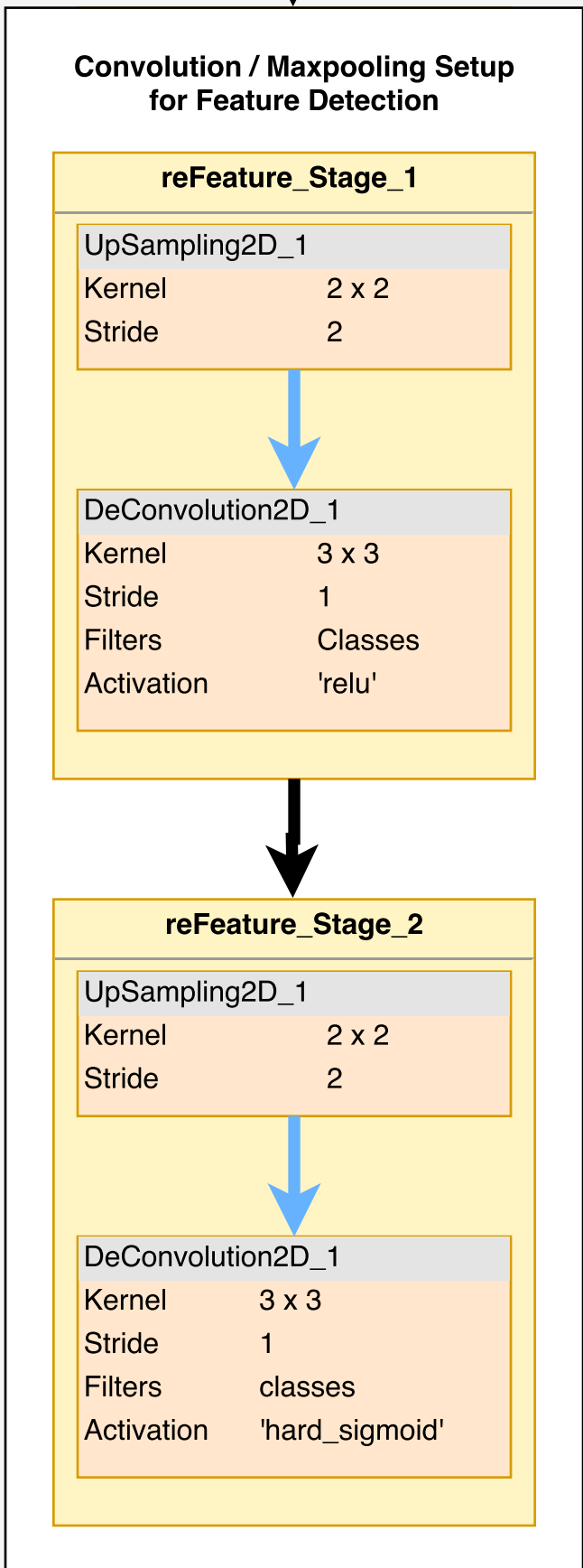
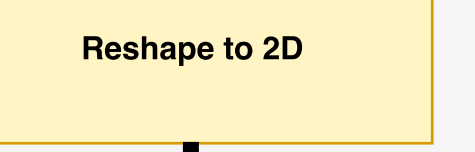
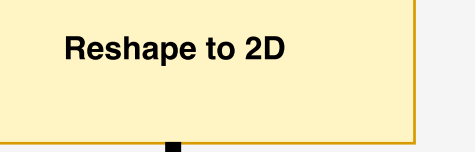
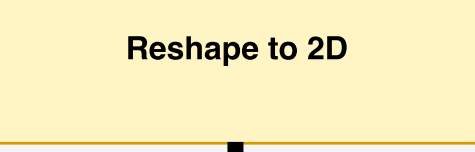
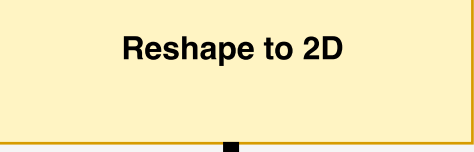
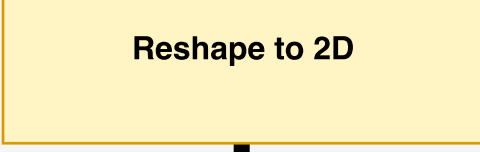
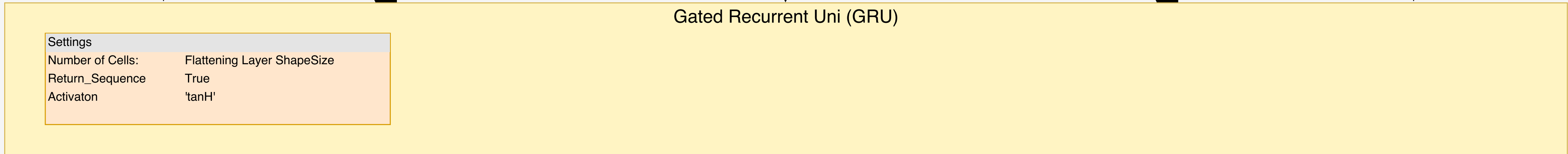
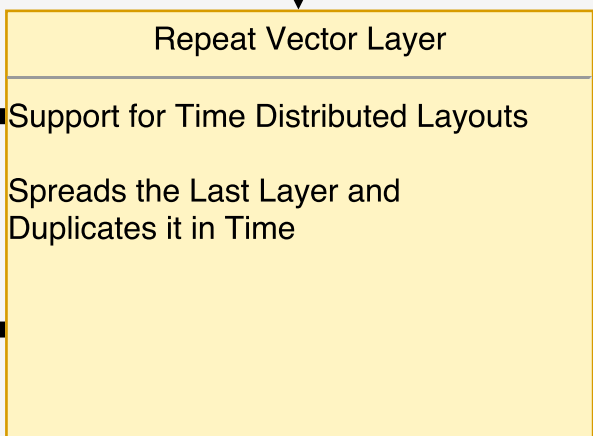
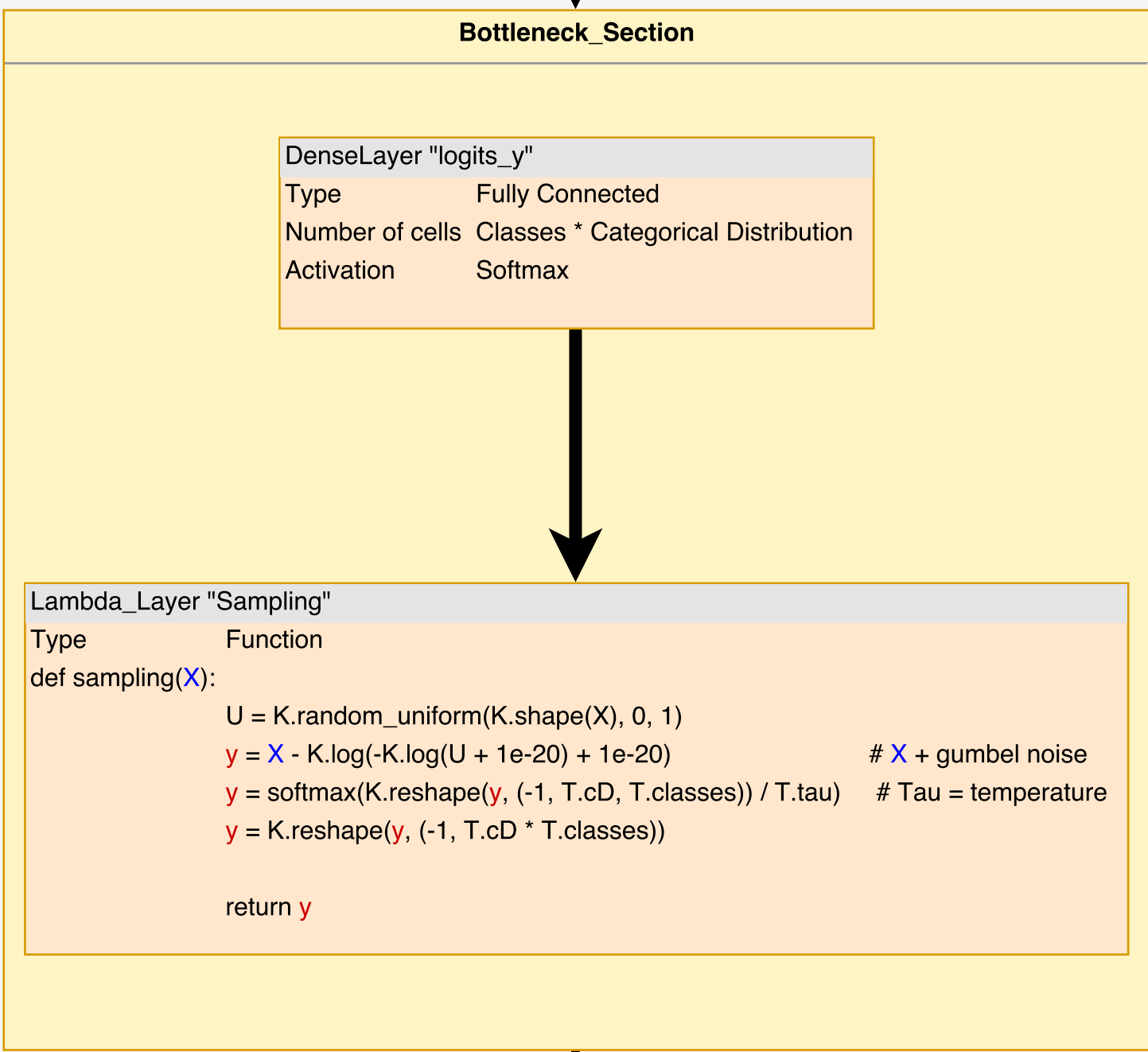
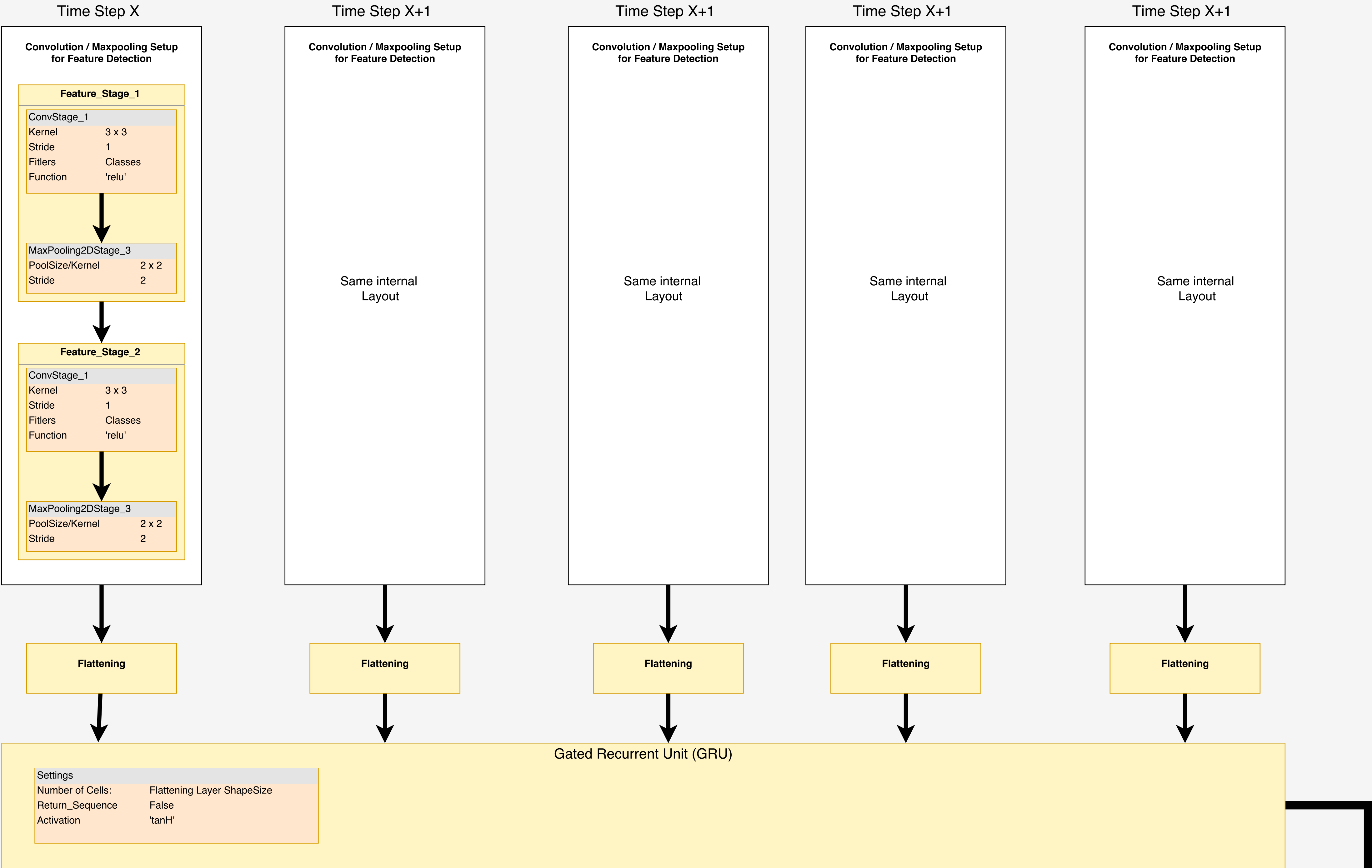


Variational Gumble-Softmax Autoencoder
with Image Processing



Time Step X + 1

Time Step X + 2

Time Step X + 3

Time Step X + N

Loss and Optimizer

Optimizer adagrad
Loss Function Custom

```
def gumbel_loss(x, x_hat):  
    q_y = K.reshape(logits_y, (-1, T.cD, T.classes))  
    q_y = softmax(q_y)  
    log_q_y = K.log(q_y + 1e-20)  
    kl_tmp = q_y * (log_q_y - K.log(1.0 / T.classes))  
    KL = K.sum(kl_tmp, axis=(1, 2))  
    x = K.reshape(x, (-1, T.original_dim))  
    x_hat = K.reshape(x_hat, (-1, T.original_dim))  
    elbo = T.original_dim * binary_crossentropy(x, x_hat) - KL  
    return elbo
```