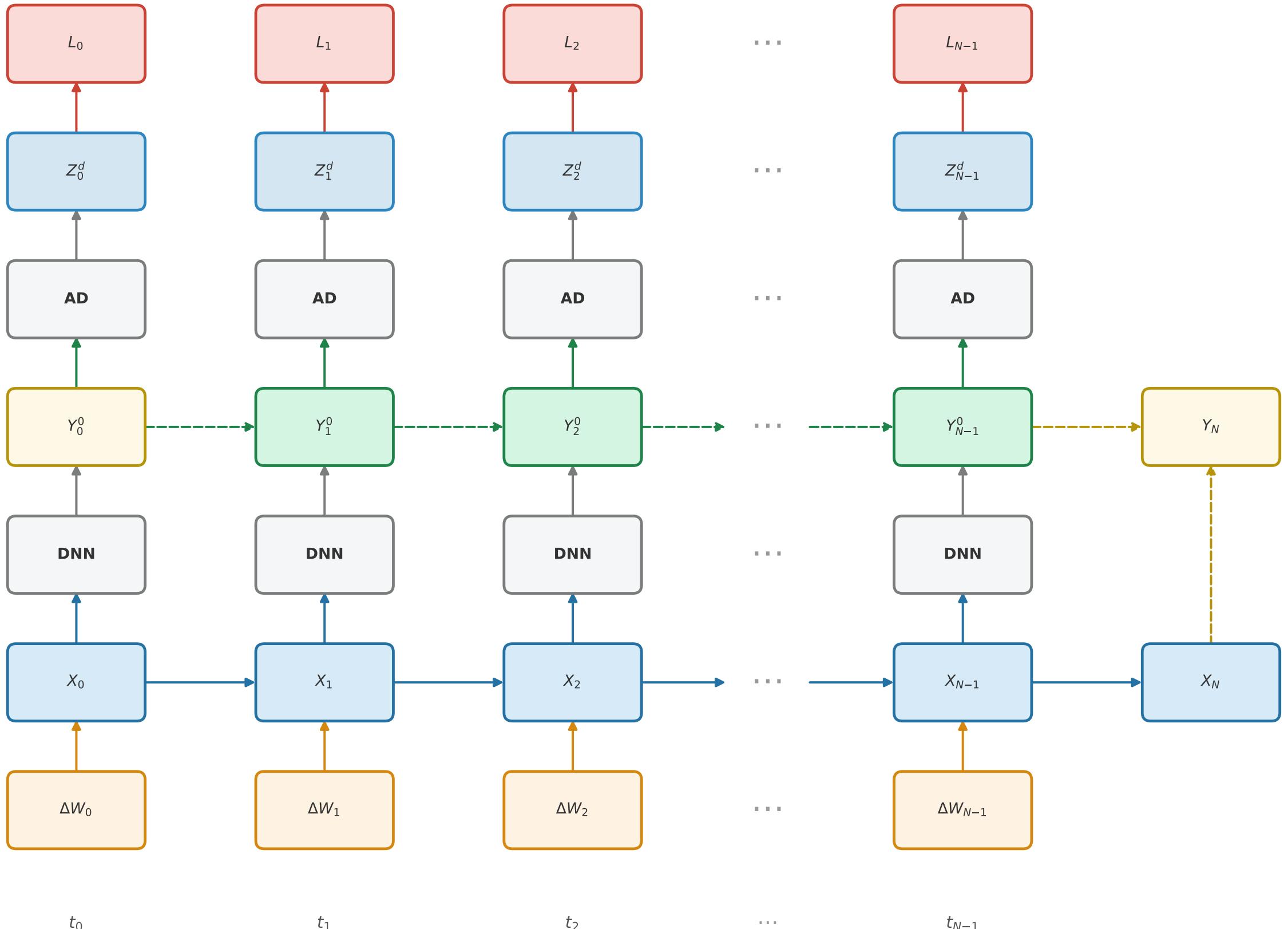


Deep BSDE Architecture — Time-Unrolled Solver



$$Y_{k+1} = Y_k + Z_k^\top \Delta W_k, \quad Z_k = \text{DNN}_\theta(t_k, X_k), \quad \Delta_k = (\sigma^\top)^+ Z_k / \tilde{S}_k, \quad \mathcal{L} = \text{MSE}(Y_N - \tilde{H})$$