Algorithm : dgcca for 3 views

Inputs :
multiview data X1 , X2 , X3
Learning Rate M
Epoch number T

START

// At Train time

for iteration t = 1, 2, . . . , T do
  //forward feeding inputs
  for each view j = 1, 2, 3 do
    Oj ← forward pass of Xj with weights Wj
    mean-center Oj
  end for

  //applying gcca on output of network
  U1, U2, U3 ,G ← gcca(O1 , O2, O3)

  // calculating and backpropogating gcca_loss to update weights
  for each view j = 1, 2, 3 do
    gcca_loss ← UjU^T j Oj − UjG
    ∇Wj ← backprop(gcca_loss)
    Wj ← Wj − M∇Wj
  end for
end for

// At Test time

  for each view j = 1, 2, 3 do
    Oj ← forward pass of Xj with weights Wj
    mean-center Oj
  end for

  U1, U2, U3 ,G ← gcca(O1 , O2, O3)

  for each view j = 1, 2, 3 do
    Oj ← U^T_j Oj
  end for

END

Output : learnt representations with maximum correlation O1, O2 , O3