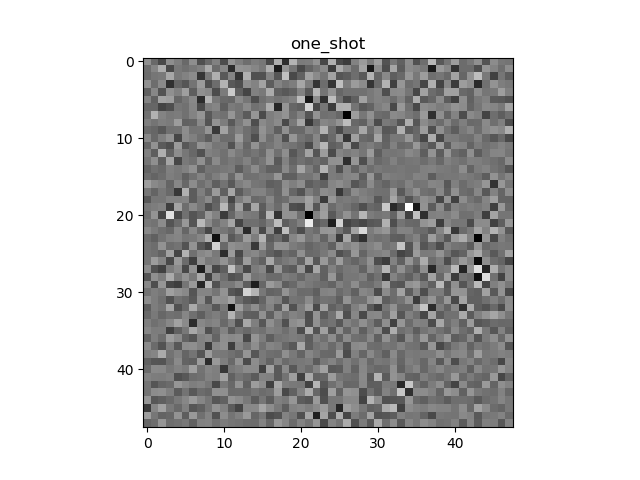
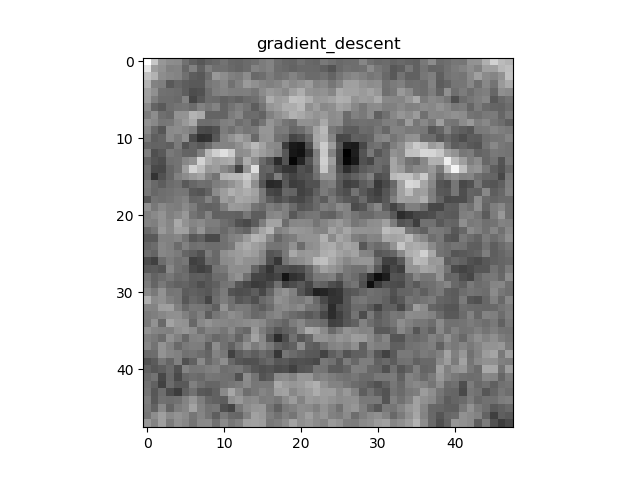
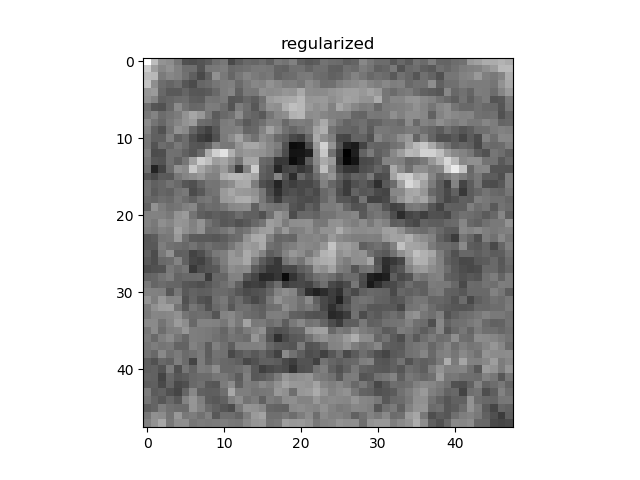
In all cases, our cost values were within hundredths of the values listed on Canvas.

Visualized Weight Images:







Regularized Gradient Descent:

Train cost: 83.61758539783453

Test cost: 93.23065152002937

Mean square error: 10.846103838993182

One observation we made when comparing the heat maps generated from the weights of each method is that while the one-hot analytical solution looked like a completely random grid of colors, the two generated by gradient descent almost look like faces! There are very clearly darker areas around where the eyes, nose, and mouth would be on an image of a face, indicating that these mean more in determining age.

The five images with the worst guesses after performing the regularized gradient descent solution are:

