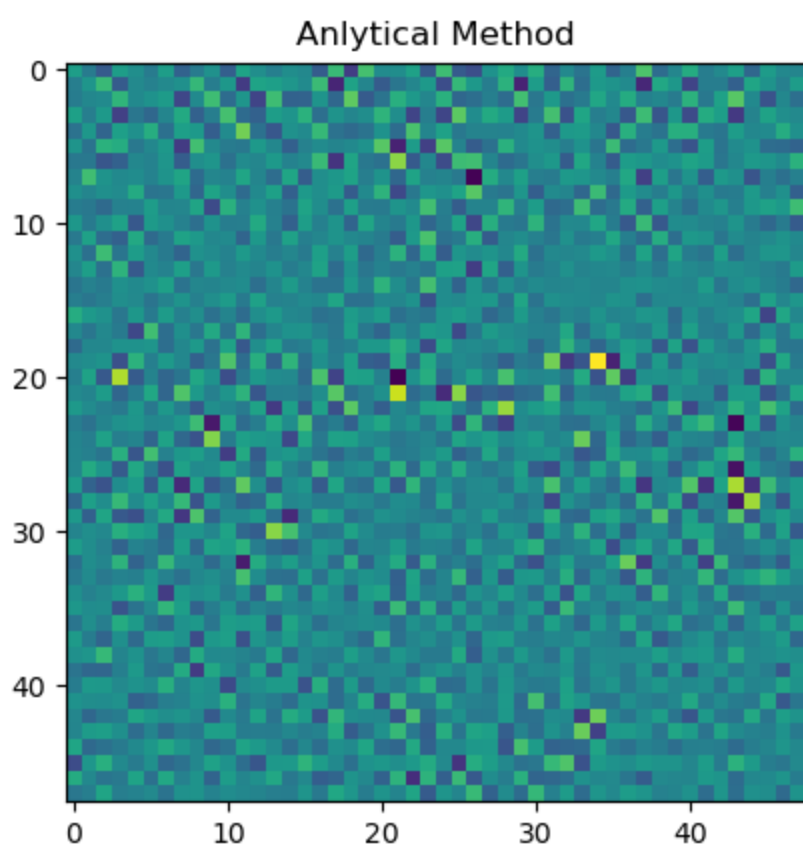
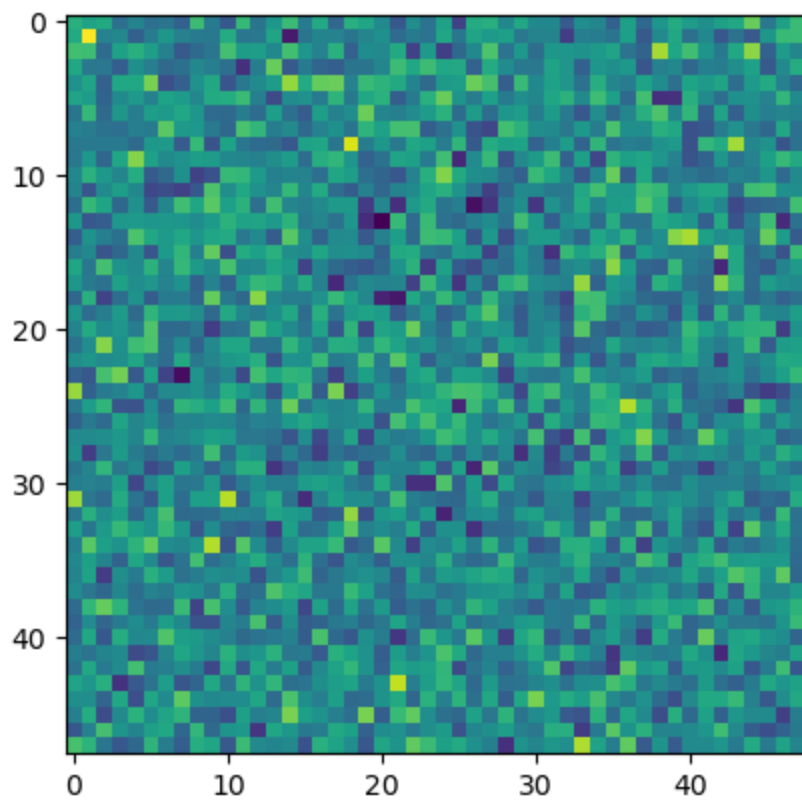
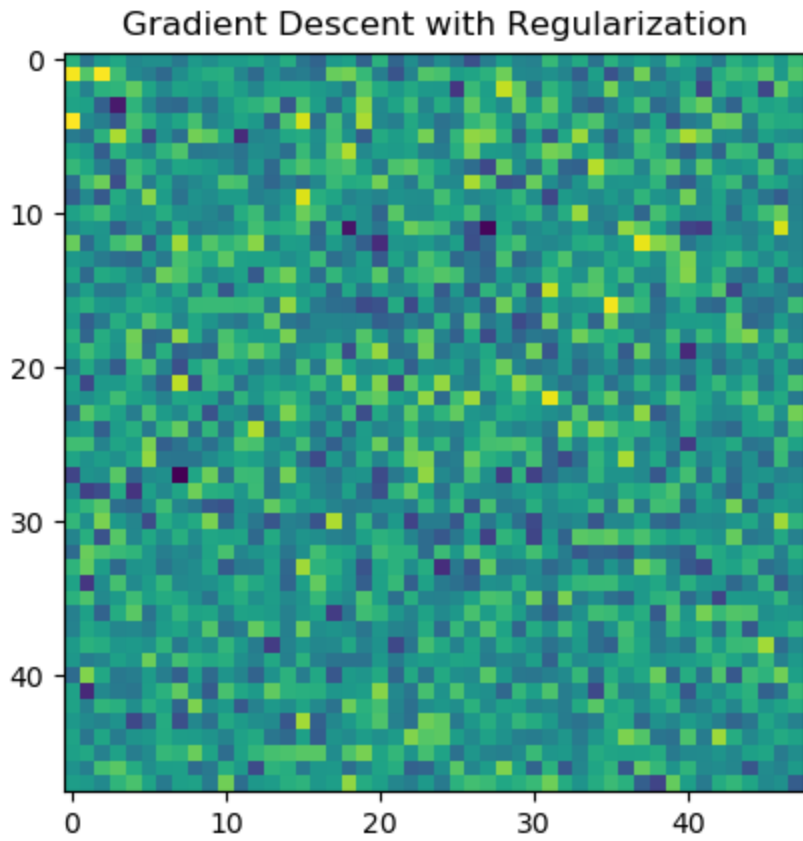


	MSE Loss (Training)	MSE Loss (Testing)
Analytical Solution	39.2423	206.796
Gradient Descent	86.220	96.789
Gradient Descent with Regularization	86.316	94.793



Gradient Descent

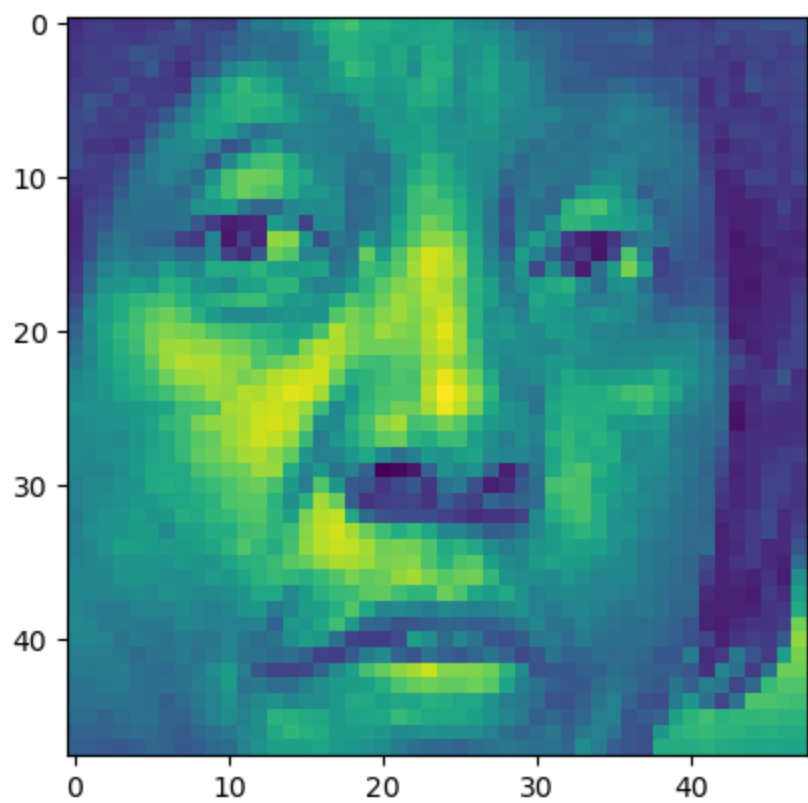




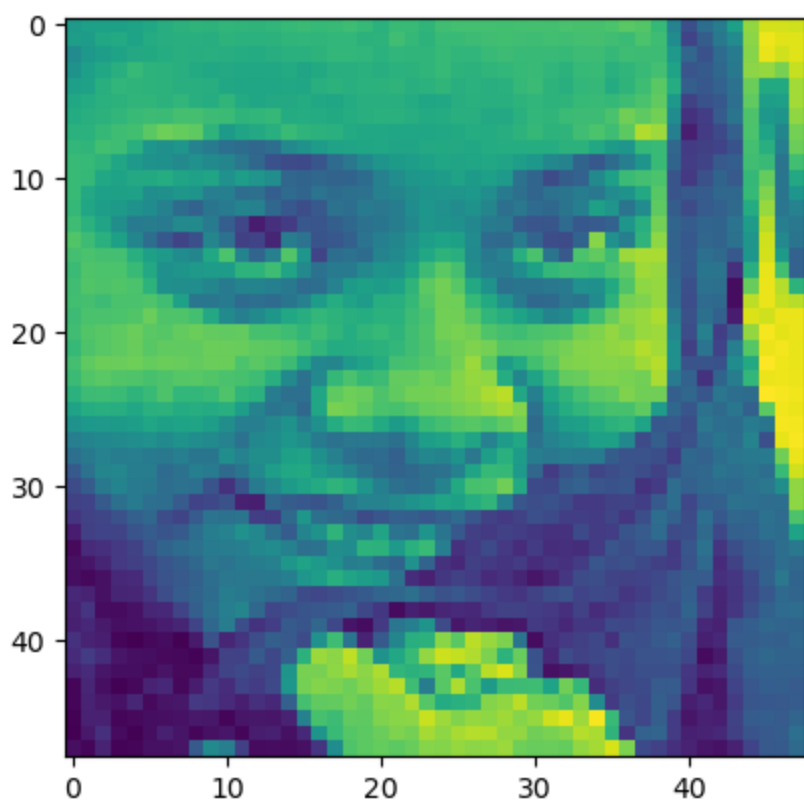
The difference between the weight vectors is that the vectors for gradient descent and the regularized gradient descent have “lighter” colored pixels symbolizing lower weight values. This is caused by the implicit regularization from the gradient descent only having 5000 iterations and the direct regularization added to the other one.

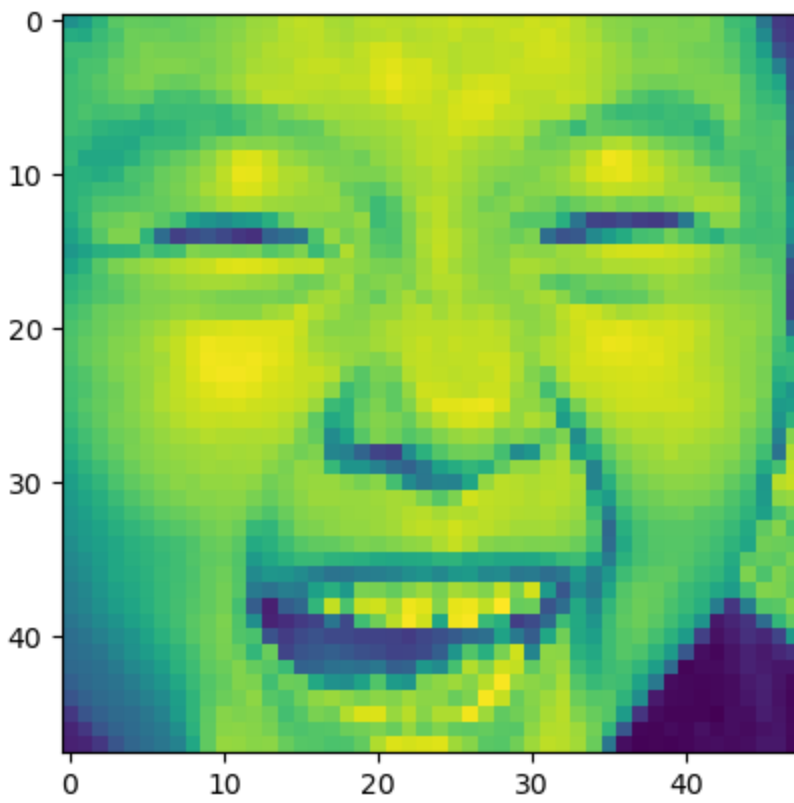
RMSE for predictions from regularized gradient descent: 13.803870873261742

5 Worst Prediction Errors					
Prediction (y-hat)	37.256	60.848	54.774	32.107	36.926
Label (y)	89.	10.	4.	80.	84.5
Picture	1	2	3	4	5

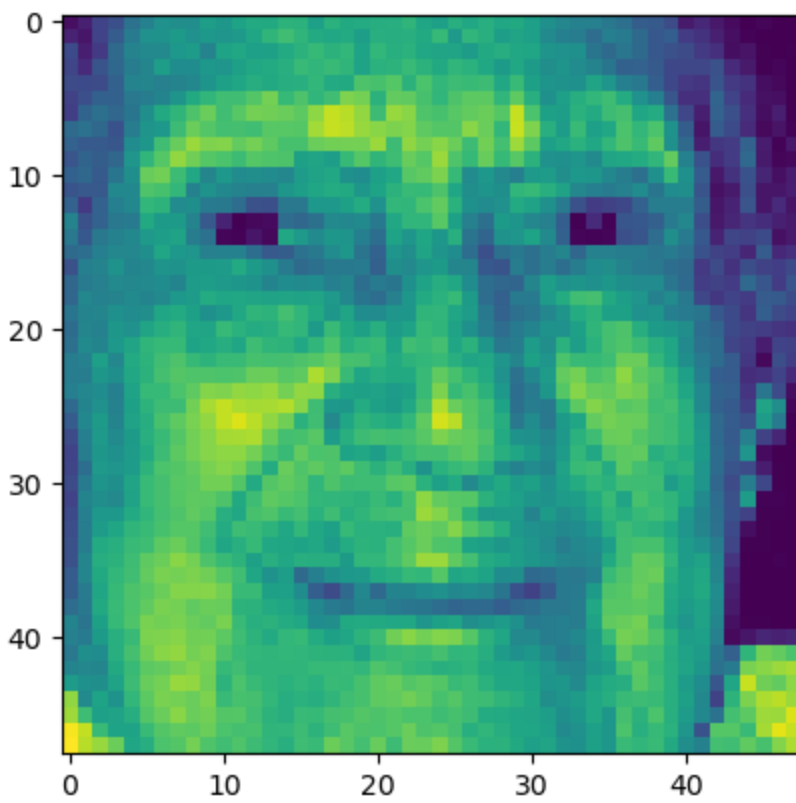


**Picture 1**



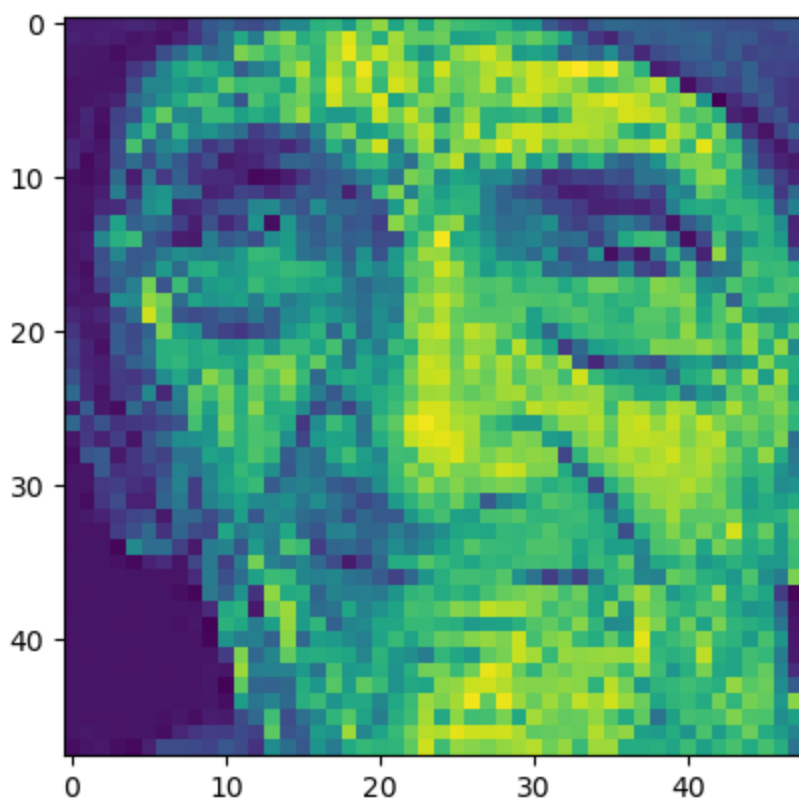


Picture 3



Picture 4





Picture 5