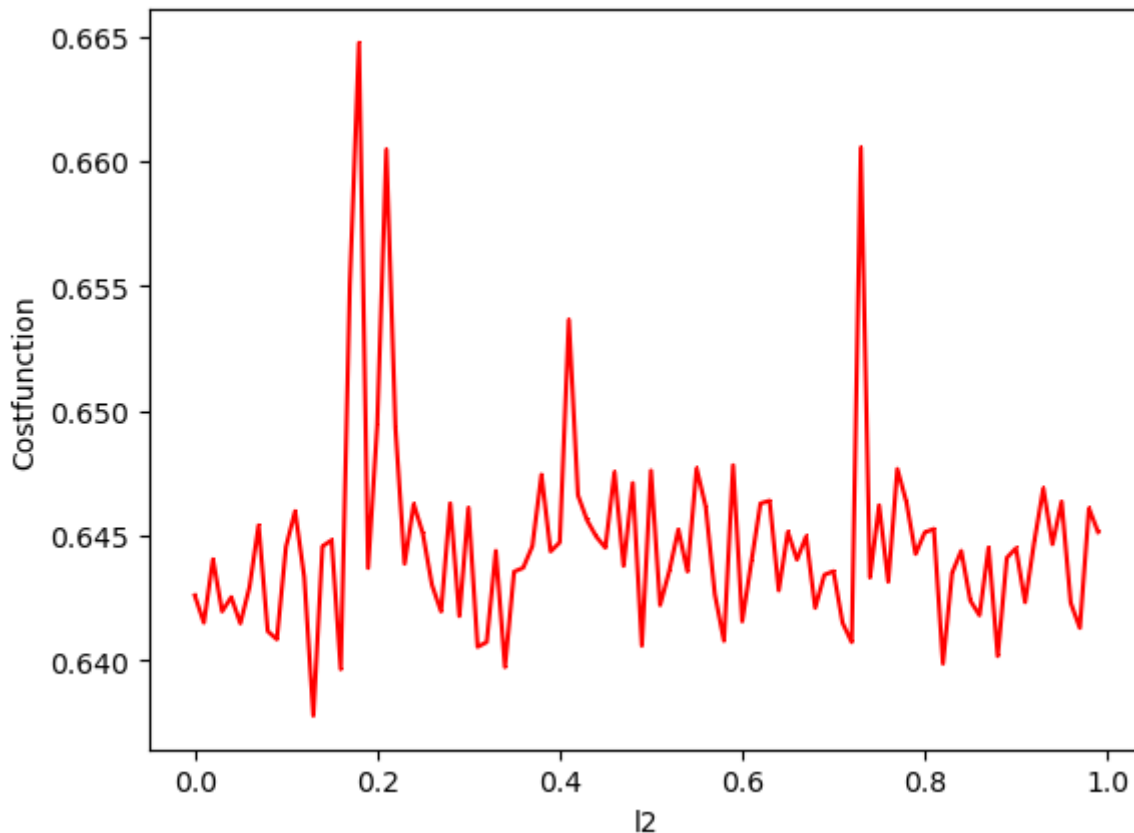


- As we increase n , the cost function spikes initially and as n increases progressively the cost function decreases converges to a value.
- As we increase θ , the cost function increases and reaches a maximum at $\theta = 0.5$. This is because the data has the maximum noise at $\theta = 0.5$. Then cost function decreases and reaches the same initial value at $\theta = 1$.

Q4



- Cost function decreases with increasing values of lambdas(coefficients of l_1 and l_2 realization), for λ between a certain range for different datasets. One can see them as dips in the cost function values. The sharp increases after these points implies underfitting and overfitting due of the model. It is important to tweak the values of λ_1 and λ_2 according to our model