

COMPSCI 589 Machine Learning

Assignment 8 Report

Task 1

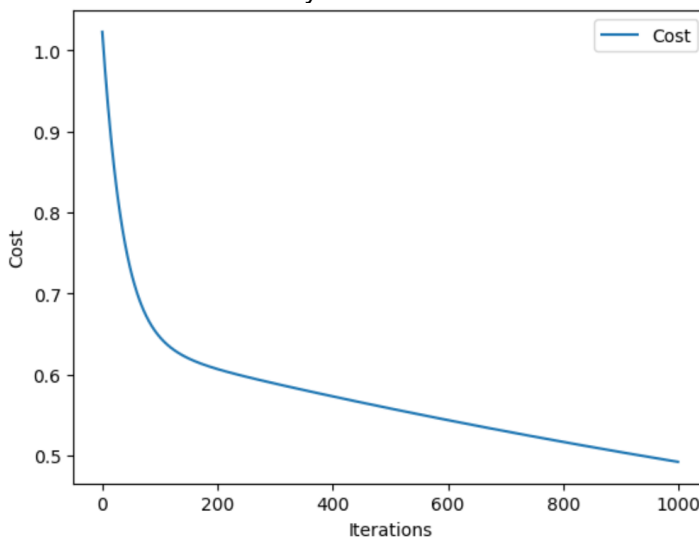
- Choice of K (used for K-fold cross validation)
 - Upon experiment, $k=5$ was chosen
- Choice of normalization method (no normalization/Standard Normalization/PCA sphering) and other preprocessing method used (if any)
 - I used Standard Normalization since I noticed gradient descent converged faster when features are normalized.
- Cost function used
 - Softmax was used
- Hyperparameter setting of your final model (learning rate, penalty of the regularizer, and other hyperparameters if any)

- `Best Overall Hyperparameters: {'k': 5, 'learning_rate': 1e-05, 'lambda': 1e-06}`

- Average validation accuracy of the model with the best set of hyperparameters during the K-Fold Cross Validation process.

- `Best Overall Accuracy: 94.54545454545455`

- Plot of cost vs. iteration of your final model **over the entire training set**



- Accuracy of your final model **on the testing set**

- `Test Accuracy: 93.33333333333333`

- The 5 most influential genes, in descending order

- `Top 5 Influential Genes: [[2897]`
`[5177]`
`[5372]`
`[4905]`
`[5578]]`