APJ180001 CS 6375
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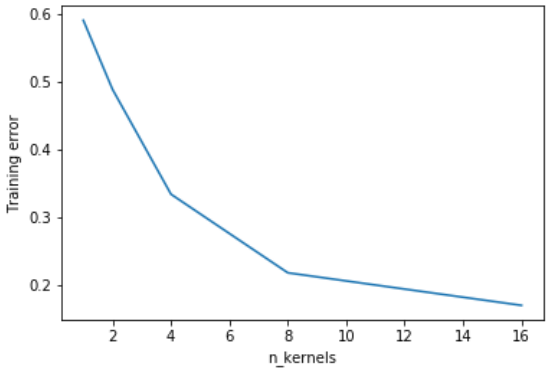
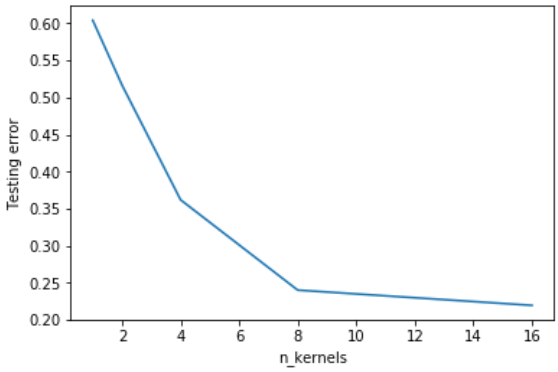
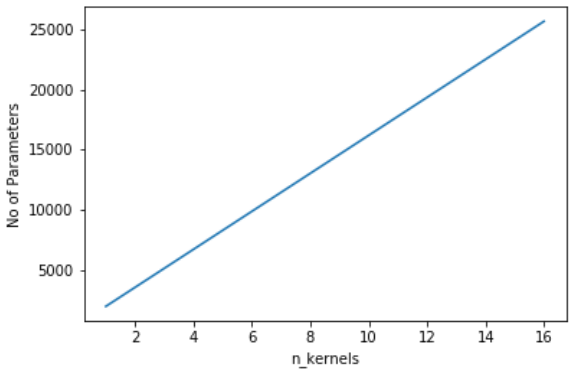
Programming Assignment #3

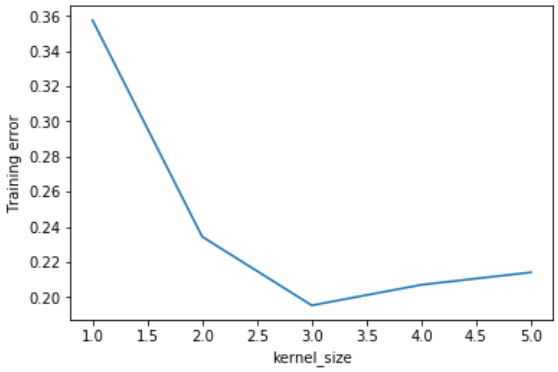
a) Here, with the increase in the value of n_kernels the training and testing error decreases, but the total number of network parameters increases linearly. Hence, the reasonable choice of n_kernels is 8. Since, after n_kernels = 8 the training and testing error reduces slowly.

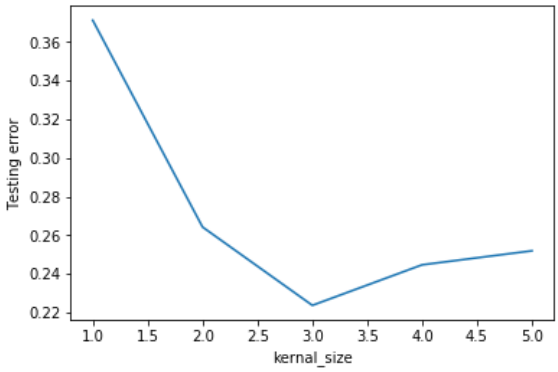


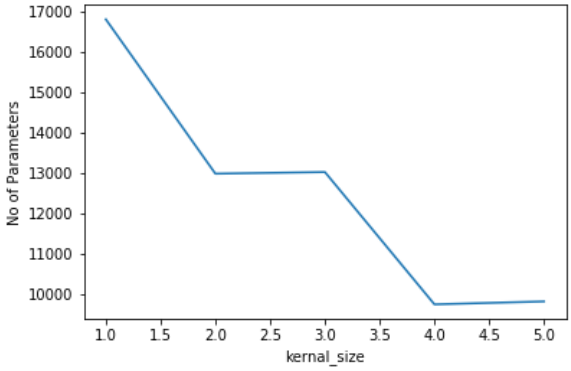




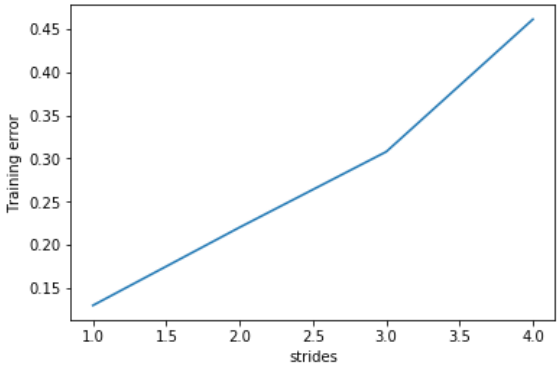
b) Here, with the increase in the value of kernel_size the training and testing error decreases up to a certain value of kernel_size i.e kernel_size=3.0 after which both errors increases slowly. While the total number of network parameters decreases with the increase of kernel_size with some plateau. Hence, the reasonable choice of kernel_size is 3. Since, after kernel_size = 3 the training and testing error increases slowly instead of decreasing.

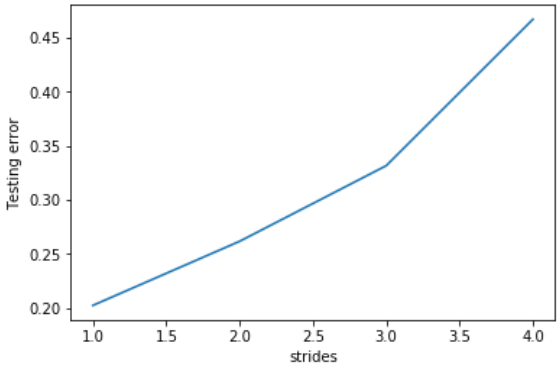


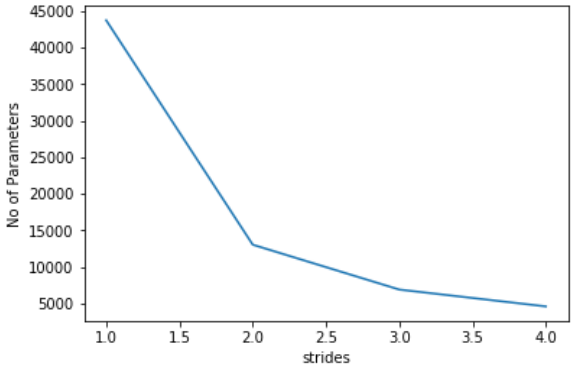




c) Here, with the increase in the value of strides the training and testing error increases, but the total number of network parameters decreases. Hence, the reasonable choice of strides is 2. Since, after strides = 2 the total number of network parameters decreases slowly.







d) Here, with the increase in the value of n_dense the training and testing error decreases, but the total number of network parameters increases linearly. Hence, the reasonable choice of n_dense is 64. Since, after n_dense = 64 the training and testing error reduces slowly.