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**EE6222: MACHINE VISION**

**Project Report (Assignment 1)**

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# Question 1

**What is the effect of direct links from the input layer to the output layer (i.e. with and without)?**

Due to limitations regarding hardware, datasets above 20000 rows will not be chosen. Instead, a sampling of 10 datasets were picked out of the 121 datasets of the UCI repository, which remain constant throughout the remaining report. The 10 datasets, along with their shapes are:

|  |  |
| --- | --- |
| **Dataset name** | **Shape (including index and label columns)** |
| abalone | (4177, 10) |
| bank | (4521, 18) |
| car | (1728, 8) |
| dermatology | (366, 36) |
| echocardiogram | (131, 12) |
| glass | (214, 11) |
| parkinsons | (195, 24) |
| seeds | (210, 9) |
| titanic | (2201, 5) |
| wine | (178, 15) |

# Question 2

**Do performance comparisons of 2 activation functions: one from “relu, sigmoid, radbas, sine” and one from “hardlim, tribas”.**

# Question 3

**Compare the performance of Moore-Penrose pseudoinverse and ridge regression (or regularized least square solutions) for the computation of the output weights.**