INCA Summative

## Section A:

* 6.75 pages
* Architectures
  + State it’s a classification problem
  + What types of architecture are suitable
  + Technical features of the architectures
  + Advantages of architectures
  + Disadvantages of architectures
* Creation/application
  + Data
    - Describe data
    - Inputs/outputs from the network
    - Transforming data into input
  + Training
    - Which training algorithm used
    - How selected
    - Sufficient detail for someone else to re-implement
  + Evaluations
    - Num neurons/layers
    - How split data
    - Explain how compare networks
    - How decided on the final network
  + Network
    - Describe best network
    - Someone else should be able to re-implement
    - Matlab defaults
  + Results
    - Relate these back to problem

## Section B:

* 2.75 pages
* NNs in recent lit for vision processing for robots
* Paper 1
  + Intro
  + Main features of the architecture
  + How network is trained
  + How much data is needed
  + How data is pre processed
  + Effectiveness for a robot vision system
* Paper 2
  + Intro
  + Main features of the architecture
  + How network is trained
  + How much data is needed
  + How data is pre processed
  + Effectiveness for a robot vision system

Overall approach is OK.

You removed the subject number and test time, for a good reason. However, the brief specified that you should create two datasets, one with only voice data and one with everything, to show the effect of leaving them in. Make sure you follow the spec.

Take care in using PCA. PCA does not discard the original variables! It produces a new set of variables, from which you can discard the least useful.

You need to be more careful in presenting results. When quoting MSEs be very clear about which dataset they relate to, and put them in the context of the problem – is the network doing anything useful given the MSEs you have. It is a regression problem – why not use regression plots?

You need to be more explicit about the network details and implementation, to ensure your work is reproducible.

## Bibliography:

* Paper 1
* Paper 2
* MATLAB refs