

Task 1: Encoding (50 pts)

Unzip the data file from the link. Encode the data into input and target files for neural network training.

Task 2: Neural Network Training (50 pts)

- Option 1: Build your own Neural Network from scratch.
- Option 2: Use Matlab Neural Network Toolbox. (-10 pts)

Train the neural network (pattern net) based on your input/output files. Report your testing, training, and validation accuracy and provide analysis.

Bonus: (20 pts for CS480 students and 10 pts for CS580 students)

Using 1024 features for neural network is very cumbersome. Is there a way to reduce the number of features? If you have an idea, show me how effective it is.

Please submit your well-documented programs, readme file, and analysis report via blackboard before the assignment due date.