CSE6250: Big Data Analytics in Healthcare
Homework 5

YOUR NAME (GTID: XXXXXXXXX)

December 30, 2020

1 Epileptic Seizure Classification

1.2 Multi-layer Perceptron

b. Calculate the number of "trainable" parameters in the model with providing the calculation details. How many floating-point computation will occur when a new single data point comes in to the model? **You can make your own assumptions on the number of computations made by each elementary arithmetic, e.g., add/subtraction/multiplication/division/negation/exponent take 1 operation, etc.** [5 points]

c. Attach the learning curves for your MLP model in your report. [2 points]

d. Attach the confusion matrix for your MLP model in your report. [2 points]

e. Explain your architecture and techniques used. Briefly discuss about the result with plots. [3 points]

1.3 Convolutional Neural Network (CNN)

b. Calculate the number of "trainable" parameters in the model with providing the calculation details. How many floating-point computation will occur when a new single data point comes in to the model? **You can make your own assumptions on the number of computations made by each elementary arithmetic, e.g., add/subtraction/multiplication/division/negation/exponent take 1 operation, etc.** [5 points]

c. Plot and attach the learning curves and the confusion matrix for your CNN model in your report. [2 points]

d. Explain your architecture and techniques used. Briefly discuss about the result with plots. [3 points]

1.4 Recurrent Neural Network (RNN)

b. Calculate the number of "trainable" parameters in the model with providing the calculation details. How many floating-point computation will occur when a new single data point comes in to the model? **You can make your own assumptions on the number of computations made by each elementary arithmetic, e.g., add/subtraction/multiplication/division/negation/exponent take 1 operation, etc.** [5 points]

c. Plot and attach the learning curves and the confusion matrix for your RNN model in your report. [2 points]

d. Explain your architecture and techniques used. Briefly discuss about the result with plots. [3 points]

2 Mortality Prediction with RNN

2.3 Building Model

b. Explain your architecture and techniques used. Briefly discuss about the result with plots. [5 points]