



Track patient recovery in real-time by processing streaming data

BIOMEDICAL DATA DESIGN

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The slide features a white background with a black border. In the corners, there are decorative blue circles: a large one in the top-left, a medium one in the top-right, a small one in the bottom-left, and a medium one in the bottom-right.

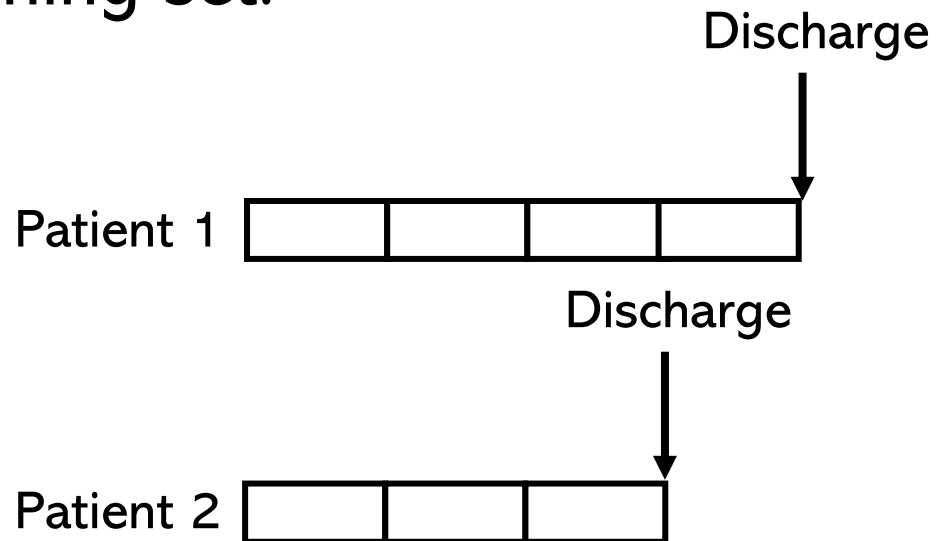
01

**Change in parameters and
data set**

01 Change the training set

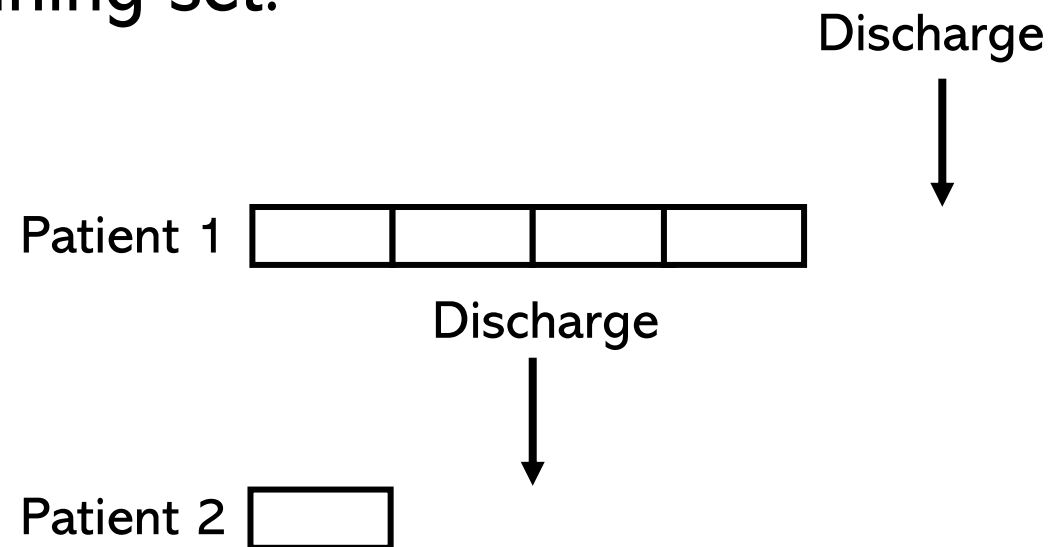
Last week:

Training set:



This week:

Training set:



01 Change the parameters

Learning rate

lr=0.0005, epoch=20 avg_acc=88.39%

Hidden size

```
Epoch 10/20, Train Loss: 0.3464, Test Accuracy: 89.49%
Epoch 11/20, Train Loss: 0.3421
Epoch 12/20, Train Loss: 0.3299
Epoch 13/20, Train Loss: 0.3394
Epoch 14/20, Train Loss: 0.3330
Epoch 15/20, Train Loss: 0.3368, Test Accuracy: 87.87%
Epoch 16/20, Train Loss: 0.3310
Epoch 17/20, Train Loss: 0.3244
Epoch 18/20, Train Loss: 0.3292
Epoch 19/20, Train Loss: 0.3169
Epoch 20/20, Train Loss: 0.3265, Test Accuracy: 88.68%
Accuracy: 0.8867924528301887
Precision: 0.8502994011976048
Recall: 0.8930817610062893
F1 Score: 0.8711656441717791
Confusion Matrix:
[[187  25]
 [ 17 142]]
```

```
Epoch 10/20, Train Loss: 0.3234, Test Accuracy: 85.64%
Epoch 11/20, Train Loss: 0.3199
Epoch 12/20, Train Loss: 0.3125
Epoch 13/20, Train Loss: 0.3022
Epoch 14/20, Train Loss: 0.3040
Epoch 15/20, Train Loss: 0.2979, Test Accuracy: 89.10%
Epoch 16/20, Train Loss: 0.3262
Epoch 17/20, Train Loss: 0.3077
Epoch 18/20, Train Loss: 0.3097
Epoch 19/20, Train Loss: 0.3083
Epoch 20/20, Train Loss: 0.2981, Test Accuracy: 89.36%
Accuracy: 0.8936170212765957
Precision: 0.8728323699421965
Recall: 0.893491124260355
F1 Score: 0.8830409356725145
Confusion Matrix:
[[185  22]
 [ 18 151]]
```

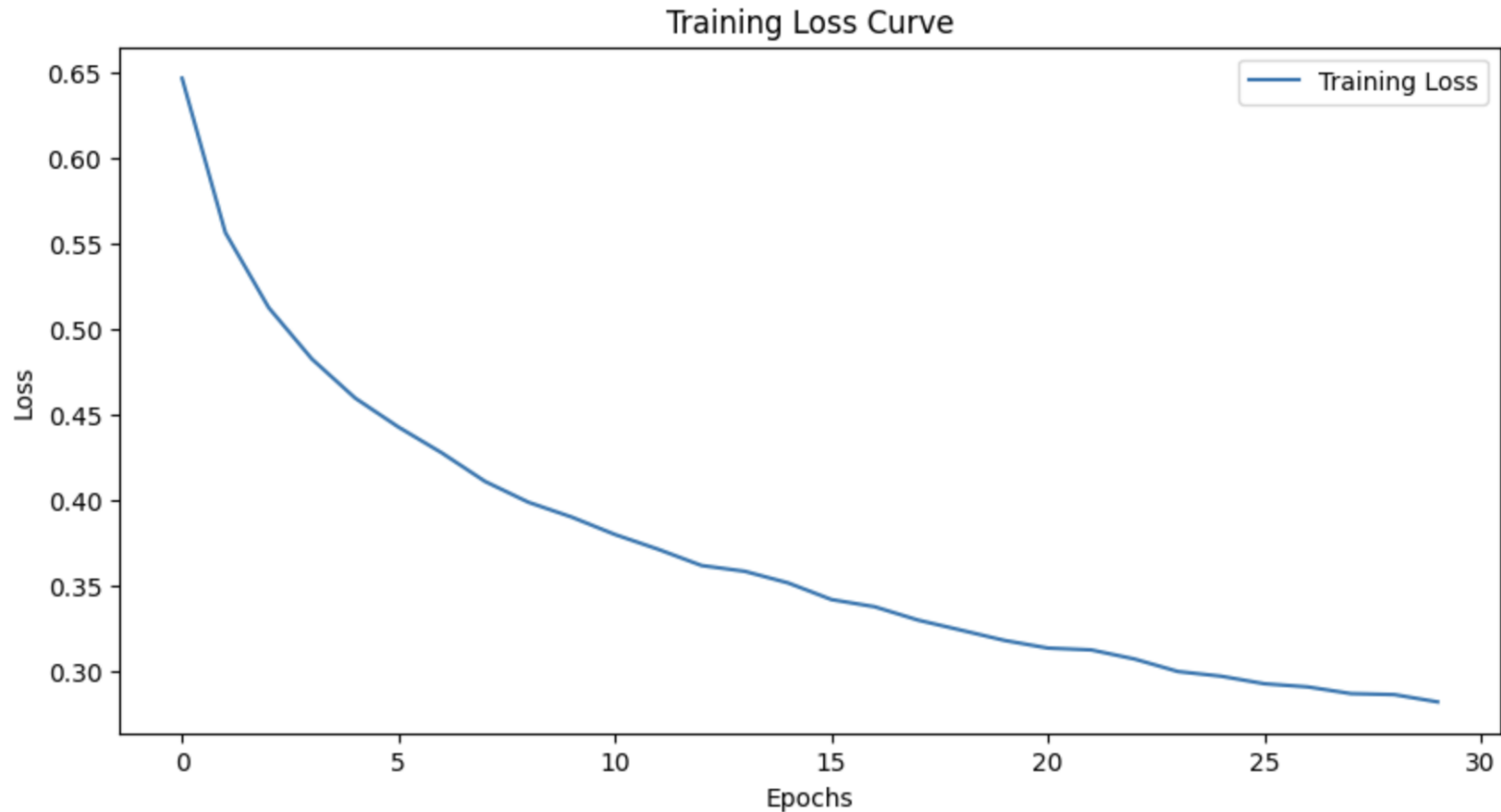
```
Epoch 10/20, Train Loss: 0.3389, Test Accuracy: 87.50%
Epoch 11/20, Train Loss: 0.3365
Epoch 12/20, Train Loss: 0.3346
Epoch 13/20, Train Loss: 0.3245
Epoch 14/20, Train Loss: 0.3310
Epoch 15/20, Train Loss: 0.3226, Test Accuracy: 88.03%
Epoch 16/20, Train Loss: 0.3186
Epoch 17/20, Train Loss: 0.3178
Epoch 18/20, Train Loss: 0.3161
Epoch 19/20, Train Loss: 0.3121
Epoch 20/20, Train Loss: 0.3079, Test Accuracy: 89.36%
Accuracy: 0.8936170212765957
Precision: 0.88125
Recall: 0.8703703703703703
F1 Score: 0.8757763975155279
Confusion Matrix:
[[195  19]
 [ 21 141]]
```

01 Change the parameters

Learning rate

$lr=0.0001, epoch=30$


Hidden size



01 Change the parameters

Learning rate

Hidden size: Trying

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02

Next Step

02 Change the parameters

1. Histogram of the length of patients:

Decide the inputs' shapes of the models

2. Organize functions starting from data organization to deep learning models

3. Get ready for poster and paper

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Thank you