# Results: bert-base-uncased-baseline-plg-[cls]-lr-[0.00005—0.00001—0.000001]

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## 1 Configurations

### 1.1 Run Configuration

|  | 0 |
| --- | --- |
| experiment_identifier | llm-baseline-[bert—sbert] |
| run_identifier | bert-base-uncased-baseline-plg-[cls]-lr-[0.000... |
| config_file_path | /tmp/71342.1.all.q/ctre/cnc-task-3/runs/config... |

### 1.2 Data Configuration

|  | 0 |
| --- | --- |
| data_utility_cls | cnc_utilities |
| dataset_cls | CNCTask3aDataset |
| nos_of_folds | 5 |
| trn_data_path | /cnc-task-3/data/csv-gold-standard/training-data/ |
| tst_data_path | /home/nadia/Documents/CLaC-Lab/ctre/cnc-task-3... |
| base_output_folder_path | /cnc-task-3/experiments/ |
| config_file_path | /tmp/71342.1.all.q/ctre/cnc-task-3/runs/config... |

### 1.3 Preprocessing Configuration

|  | 0 |
| --- | --- |
| collate_fn_name | LLMCollateFn |
| llm_name | bert-base-uncased |
| connl_folder_path | /home/nadia/Documents/CLaC-Lab/ctre/cnc-task-3... |
| max_nos_tokens | 84 |
| token_sep | True |
| config_file_path | /tmp/71342.1.all.q/ctre/cnc-task-3/runs/config... |

# 2 Hyperparameters

## 2.1 hparam_config_id_0

|                                  | 0                 |
| -------------------------------- | ----------------- |
| loss_function                    | cross-entropy-loss |
| learning_rate                    | 0.00005           |
| batch_size                       | 1                 |
| optimizer                        | adam              |
| llm                              | bert-base-uncased |
| llm_hidden_dropout_prob          | 0.1               |
| llm_attention_probs_dropout_prob | 0.1               |
| pooling                          | cls               |
| classes                          | 2                 |
| max_epochs                       | 10                |

## 2.2 hparam_config_id_1

|                                  | 0                 |
| -------------------------------- | ----------------- |
| loss_function                    | cross-entropy-loss |
| learning_rate                    | 0.00001           |
| batch_size                       | 1                 |
| optimizer                        | adam              |
| llm                              | bert-base-uncased |
| llm_hidden_dropout_prob          | 0.1               |
| llm_attention_probs_dropout_prob | 0.1               |
| pooling                          | cls               |
| classes                          | 2                 |
| max_epochs                       | 10                |

## 2.3 hparam_config_id_2

|                                  | 0                 |
| -------------------------------- | ----------------- |
| loss_function                    | cross-entropy-loss |
| learning_rate                    | 0.000005          |
| batch_size                       | 1                 |
| optimizer                        | adam              |
| llm                              | bert-base-uncased |
| llm_hidden_dropout_prob          | 0.1               |
| llm_attention_probs_dropout_prob | 0.1               |
| pooling                          | cls               |
| classes                          | 2                 |
| max_epochs                       | 10                |

# 3 fold_0

## 3.1 train_loss

|       | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0  | 0.646 | 0.645 | 0.683 | 0.688 | 0.686 | 0.690 | 0.688 | 0.688 | 0.688 | 0.687 |
| hp_1  | 0.510 | 0.228 | 0.068 | 0.027 | 0.027 | 0.021 | 0.012 | 0.013 | 0.013 | 0.007 |
| hp_2  | 0.537 | 0.262 | 0.061 | 0.025 | 0.023 | 0.013 | 0.010 | 0.007 | 0.005 | 0.000 |



train_loss across epochs for fold_0 across epochs
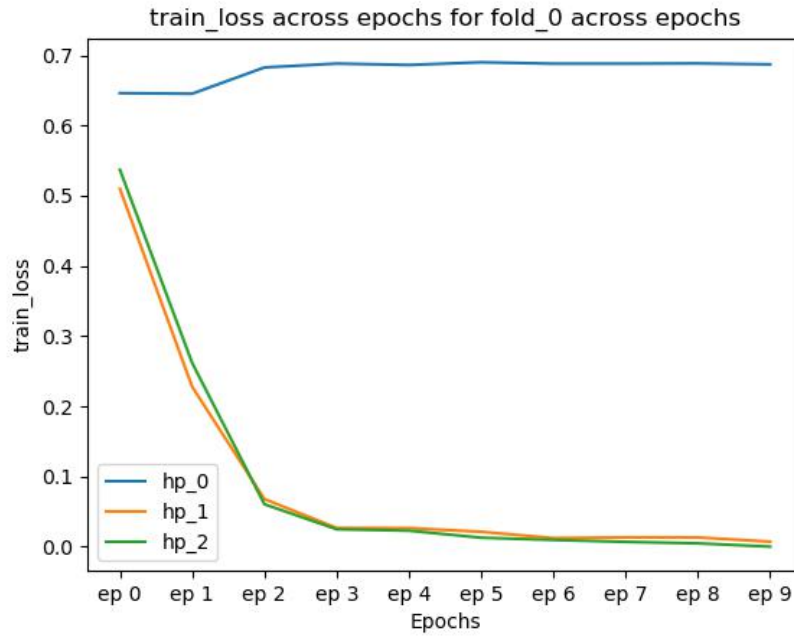
## 3.2 test_loss

|       | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0  | 0.714 | 0.701 | 0.717 | 0.722 | 0.718 | 0.695 | 0.694 | 0.696 | 0.696 | 0.712 |
| hp_1  | 0.480 | 0.512 | 0.744 | 0.881 | 0.859 | 1.038 | 1.261 | 1.204 | 1.270 | 1.431 |
| hp_2  | 0.479 | 0.526 | 0.766 | 0.916 | 0.955 | 0.976 | 1.191 | 1.082 | 1.269 | 1.421 |

test_loss across epochs for fold_0 across epochs
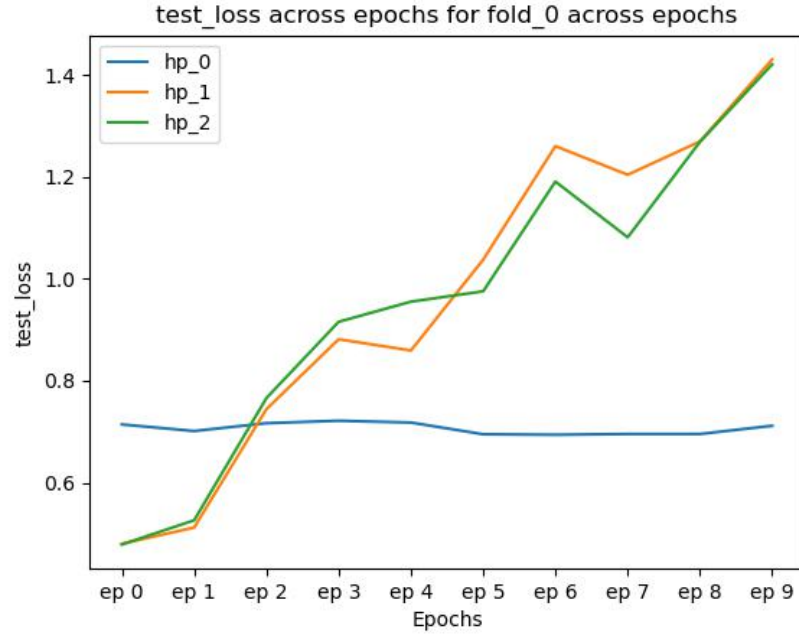
## 3.3 accuracy_score

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 |
| hp_1 | 0.796 | 0.784 | 0.799 | 0.784 | 0.794 | 0.775 | 0.803 | 0.803 | 0.799 | 0.786 |
| hp_2 | 0.760 | 0.773 | 0.792 | 0.797 | 0.775 | 0.777 | 0.786 | 0.810 | 0.796 | 0.796 |

accuracy_score across epochs for fold_0 across epochs
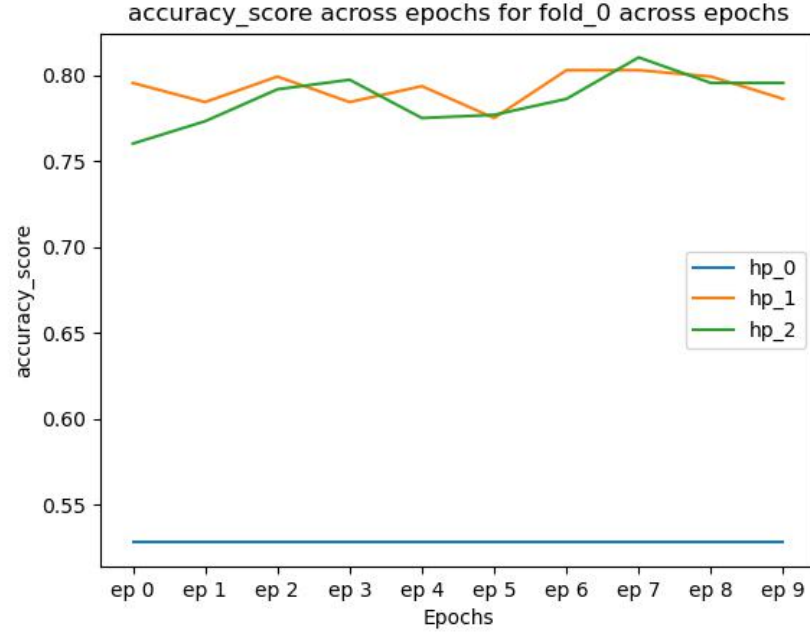
### 3.4   f1_score

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.691 | 0.691 | 0.691 | 0.691 | 0.691 | 0.691 | 0.691 | 0.691 | 0.691 | 0.691 |
| hp_1 | 0.825 | 0.810 | 0.811 | 0.808 | 0.799 | 0.784 | 0.817 | 0.818 | 0.814 | 0.811 |
| hp_2 | 0.795 | 0.806 | 0.810 | 0.806 | 0.803 | 0.782 | 0.809 | 0.827 | 0.820 | 0.815 |

f1_score across epochs for fold_0 across epochs
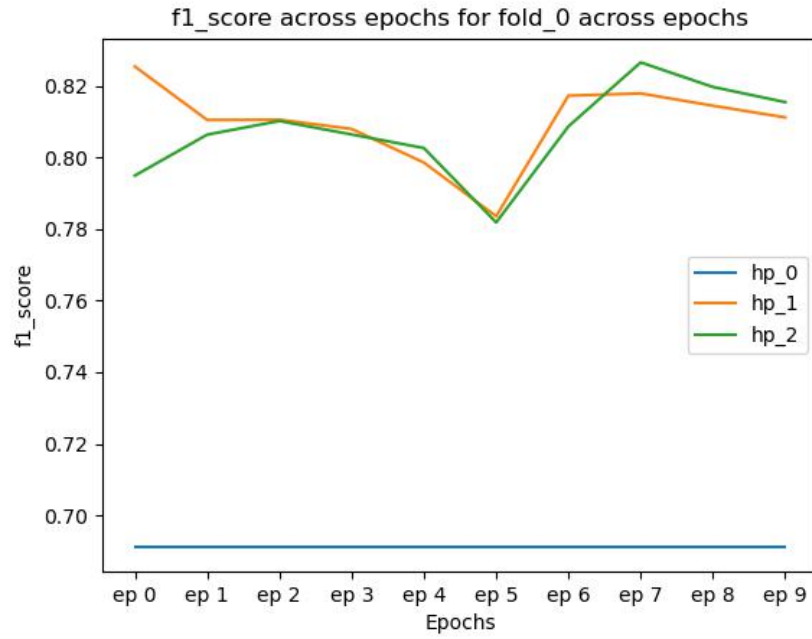
## 3.5 precision_score

|       | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0  | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 | 0.528 |
| hp_1  | 0.751 | 0.756 | 0.808 | 0.762 | 0.824 | 0.796 | 0.801 | 0.799 | 0.795 | 0.760 |
| hp_2  | 0.725 | 0.734 | 0.781 | 0.814 | 0.748 | 0.808 | 0.767 | 0.799 | 0.767 | 0.779 |

precision_score across epochs for fold_0 across epochs
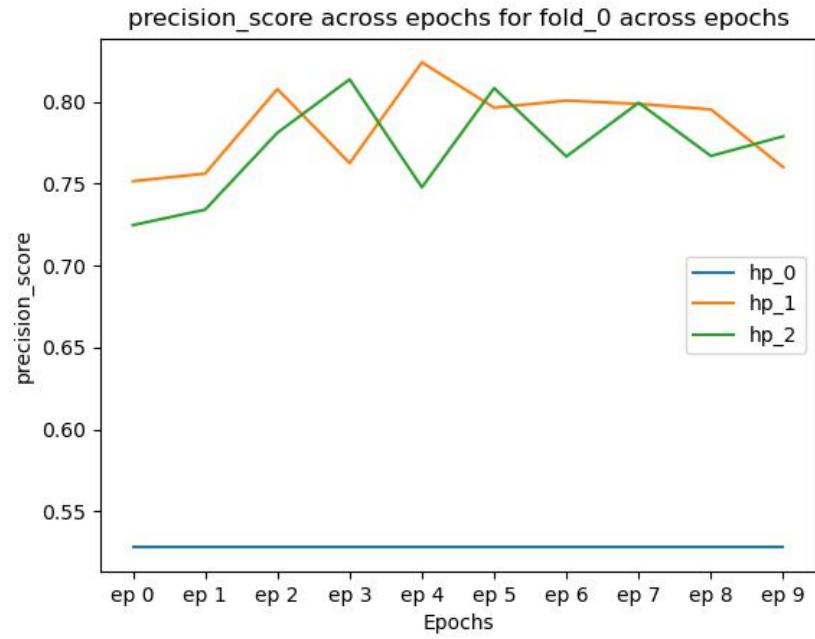
## 3.6 matthews_corrcoef

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| hp_1 | 0.601 | 0.571 | 0.597 | 0.569 | 0.589 | 0.550 | 0.604 | 0.604 | 0.597 | 0.574 |
| hp_2 | 0.527 | 0.555 | 0.582 | 0.594 | 0.553 | 0.555 | 0.573 | 0.620 | 0.594 | 0.591 |

matthews_corrcoef across epochs for fold_0 across epochs
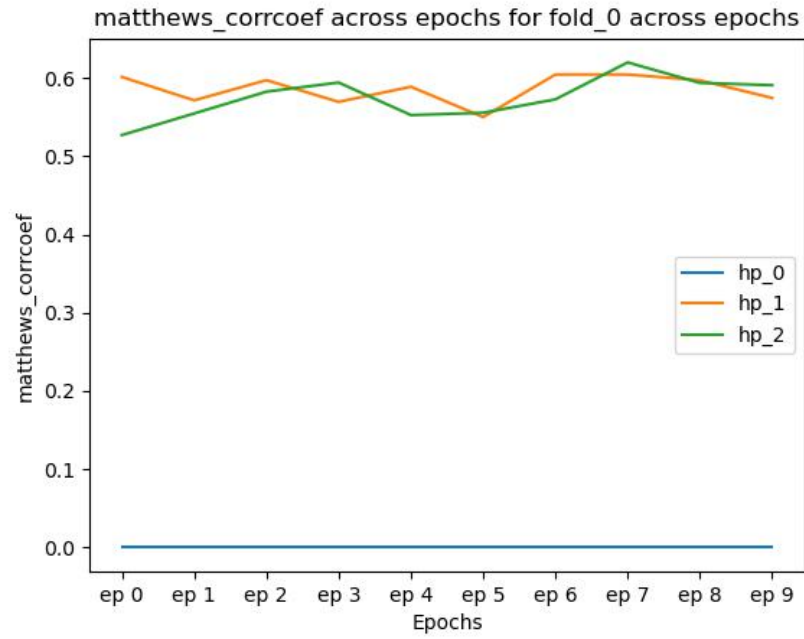
## 3.7 recall_score

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| hp_1 | 0.915 | 0.873 | 0.813 | 0.859 | 0.775 | 0.771 | 0.835 | 0.838 | 0.835 | 0.870 |
| hp_2 | 0.880 | 0.894 | 0.842 | 0.799 | 0.866 | 0.757 | 0.856 | 0.856 | 0.880 | 0.856 |

recall_score across epochs for fold_0 across epochs
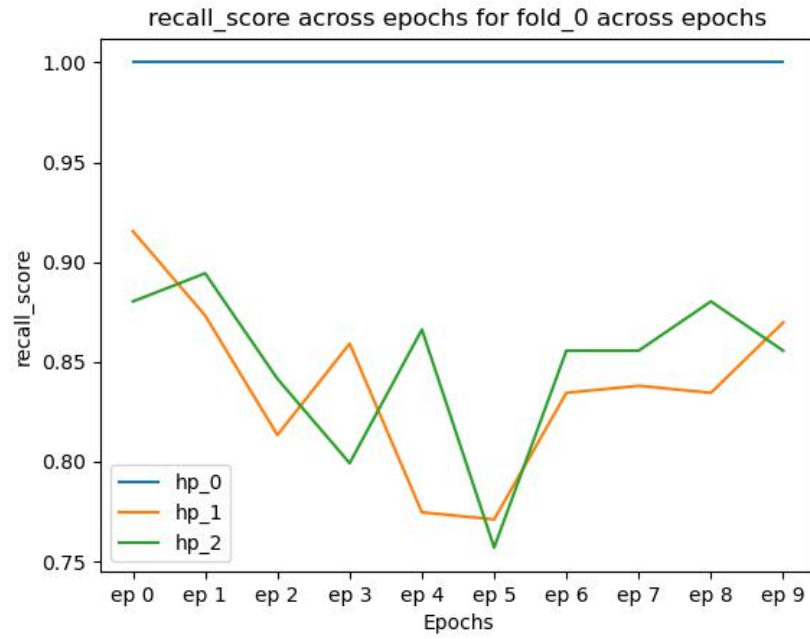
# 4   fold_1

## 4.1   train_loss

|        | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0   | 0.668 | 0.650 | 0.694 | 0.693 | 0.692 | 0.694 | 0.693 | 0.692 | 0.692 | 0.692 |
| hp_1   | 0.522 | 0.238 | 0.050 | 0.034 | 0.027 | 0.009 | 0.028 | 0.014 | 0.003 | 0.000 |
| hp_2   | 0.556 | 0.290 | 0.057 | 0.015 | 0.020 | 0.013 | 0.015 | 0.005 | 0.010 | 0.000 |

train_loss across epochs for fold_1 across epochs
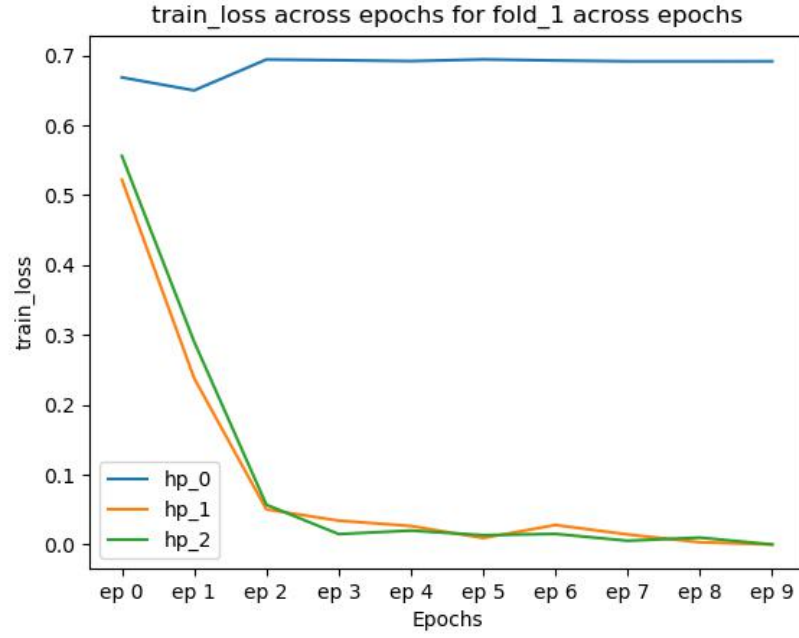
## 4.2    test_loss

|       | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0  | 0.585 | 0.698 | 0.688 | 0.694 | 0.698 | 0.690 | 0.686 | 0.686 | 0.687 | 0.686 |
| hp_1  | 0.456 | 0.466 | 0.589 | 0.744 | 0.883 | 0.972 | 0.781 | 0.783 | 1.148 | 1.183 |
| hp_2  | 0.453 | 0.439 | 0.744 | 0.741 | 0.839 | 0.920 | 0.852 | 1.282 | 1.047 | 1.242 |

test_loss across epochs for fold_1 across epochs
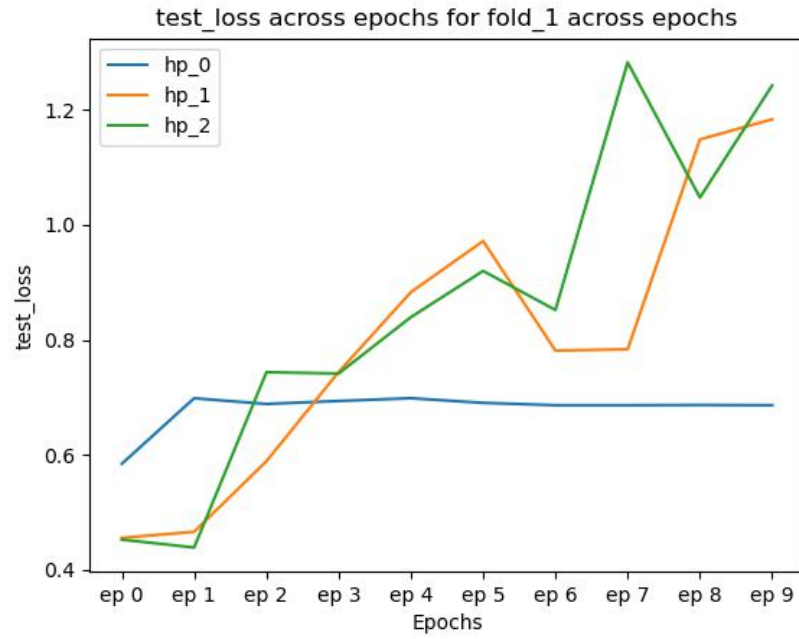
## 4.3 accuracy_score

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.678 | 0.559 | 0.559 | 0.559 | 0.559 | 0.559 | 0.559 | 0.559 | 0.559 | 0.559 |
| hp_1 | 0.801 | 0.808 | 0.829 | 0.812 | 0.818 | 0.808 | 0.838 | 0.842 | 0.827 | 0.831 |
| hp_2 | 0.791 | 0.793 | 0.799 | 0.819 | 0.821 | 0.819 | 0.821 | 0.801 | 0.823 | 0.816 |

accuracy_score across epochs for fold_1 across epochs
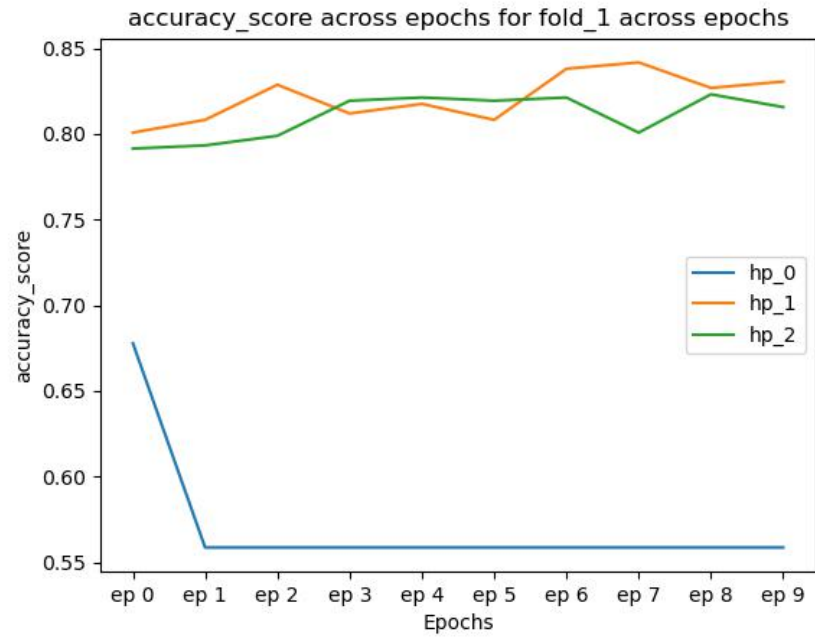
## 4.4   f1_score

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.716 | 0.717 | 0.717 | 0.717 | 0.717 | 0.717 | 0.717 | 0.717 | 0.717 | 0.717 |
| hp_1 | 0.840 | 0.844 | 0.852 | 0.841 | 0.843 | 0.845 | 0.857 | 0.858 | 0.854 | 0.852 |
| hp_2 | 0.834 | 0.833 | 0.828 | 0.844 | 0.850 | 0.843 | 0.844 | 0.840 | 0.848 | 0.847 |

f1_score across epochs for fold_1 across epochs
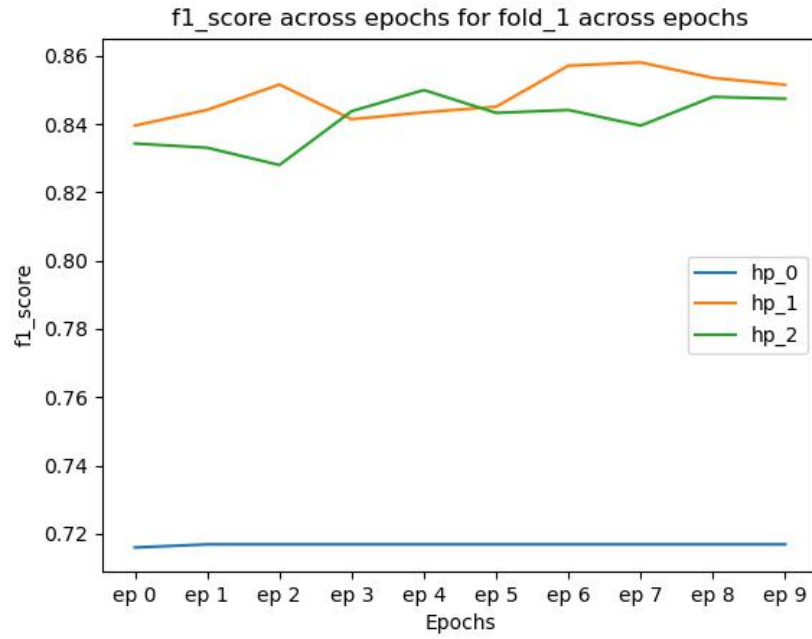
## 4.5 precision_score

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.706 | 0.559 | 0.559 | 0.559 | 0.559 | 0.559 | 0.559 | 0.559 | 0.559 | 0.559 |
| hp_1 | 0.763 | 0.773 | 0.825 | 0.795 | 0.810 | 0.770 | 0.845 | 0.860 | 0.809 | 0.834 |
| hp_2 | 0.750 | 0.759 | 0.793 | 0.816 | 0.800 | 0.818 | 0.823 | 0.763 | 0.815 | 0.788 |

precision_score across epochs for fold_1 across epochs
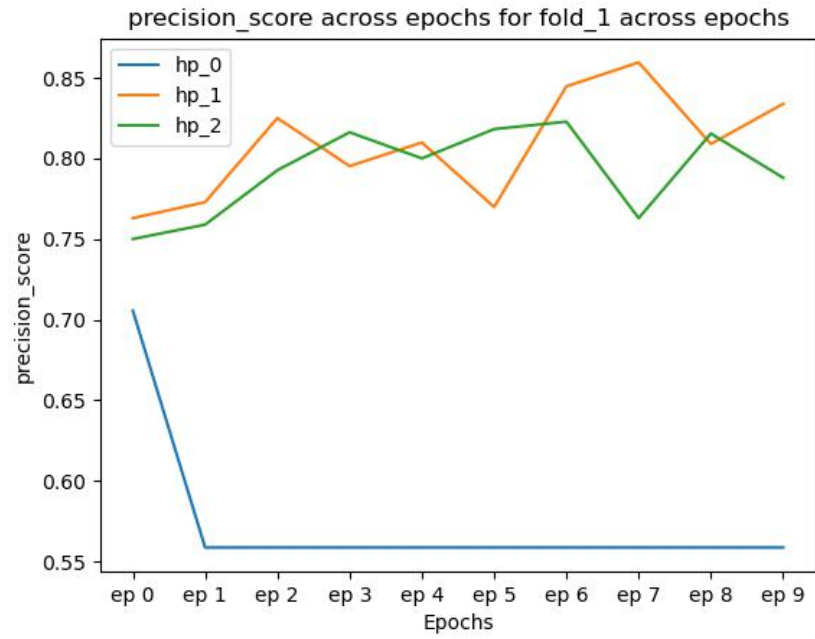
## 4.6    matthews_corrcoef

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.344 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| hp_1 | 0.604 | 0.618 | 0.651 | 0.619 | 0.629 | 0.620 | 0.671 | 0.679 | 0.649 | 0.655 |
| hp_2 | 0.589 | 0.587 | 0.590 | 0.632 | 0.639 | 0.632 | 0.636 | 0.604 | 0.640 | 0.629 |

matthews_corrcoef across epochs for fold_1 across epochs
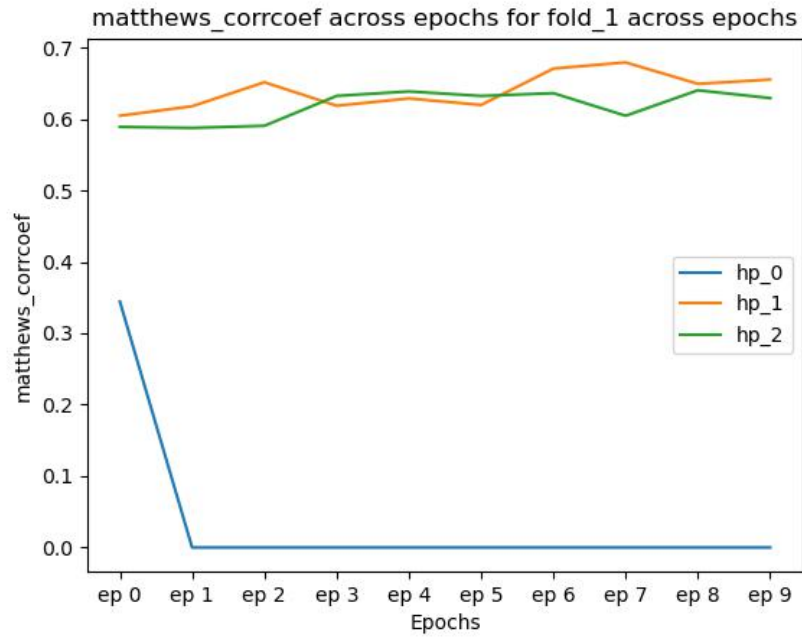
## 4.7   recall_score

|       | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0  | 0.727 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| hp_1  | 0.933 | 0.930 | 0.880 | 0.893 | 0.880 | 0.937 | 0.870 | 0.857 | 0.903 | 0.870 |
| hp_2  | 0.940 | 0.923 | 0.867 | 0.873 | 0.907 | 0.870 | 0.867 | 0.933 | 0.883 | 0.917 |

recall_score across epochs for fold_1 across epochs
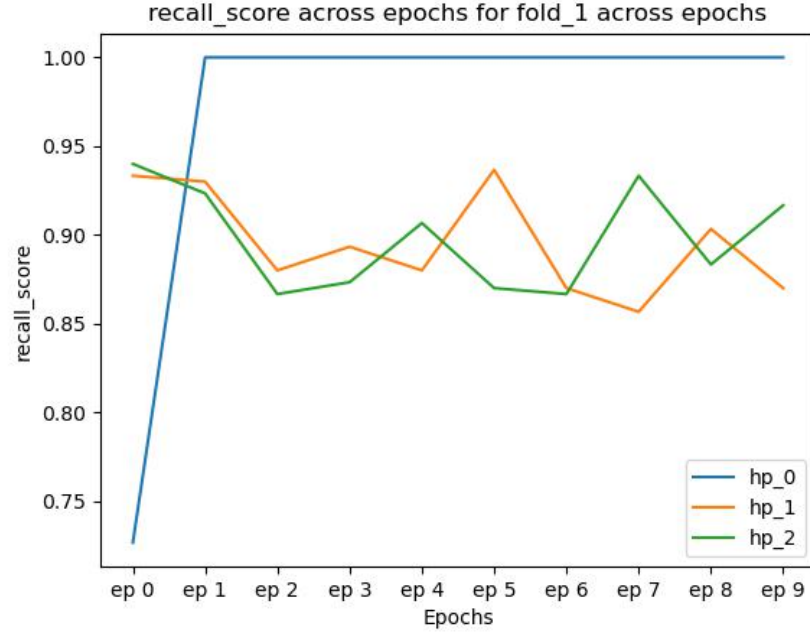
## 5 fold_2

### 5.1 train_loss

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.676 | 0.692 | 0.687 | 0.691 | 0.692 | 0.691 | 0.690 | 0.695 | 0.692 | 0.691 |
| hp_1 | 0.505 | 0.224 | 0.047 | 0.026 | 0.026 | 0.022 | 0.025 | 0.010 | 0.018 | 0.007 |
| hp_2 | 0.560 | 0.281 | 0.048 | 0.022 | 0.020 | 0.002 | 0.000 | 0.010 | 0.016 | 0.012 |

train_loss across epochs for fold_2 across epochs
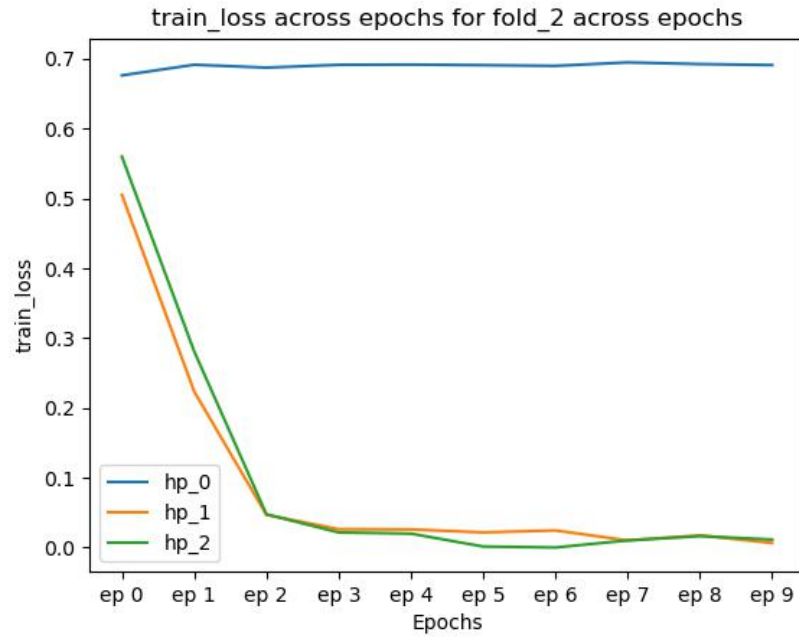
## 5.2    test_loss

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.692 | 0.699 | 0.690 | 0.690 | 0.689 | 0.689 | 0.701 | 0.692 | 0.690 | 0.689 |
| hp_1 | 0.453 | 0.533 | 0.842 | 1.160 | 1.031 | 0.922 | 0.987 | 1.116 | 0.870 | 1.111 |
| hp_2 | 0.458 | 0.480 | 0.791 | 0.736 | 0.941 | 1.193 | 1.391 | 1.075 | 0.995 | 1.112 |

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test_loss across epochs for fold_2 across epochs
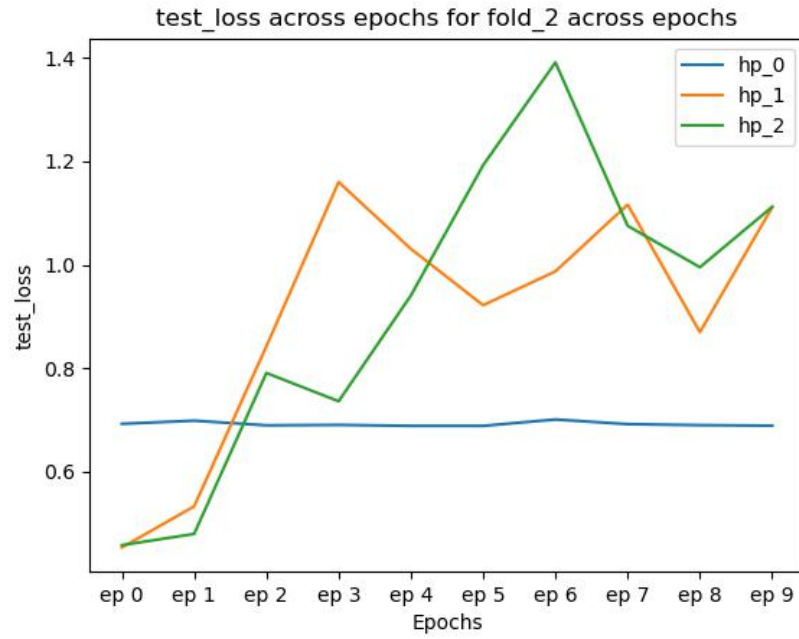
## 5.3   accuracy_score

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 |
| hp_1 | 0.795 | 0.799 | 0.803 | 0.775 | 0.801 | 0.812 | 0.795 | 0.804 | 0.821 | 0.801 |
| hp_2 | 0.799 | 0.795 | 0.812 | 0.795 | 0.806 | 0.801 | 0.788 | 0.797 | 0.806 | 0.812 |

accuracy_score across epochs for fold_2 across epochs
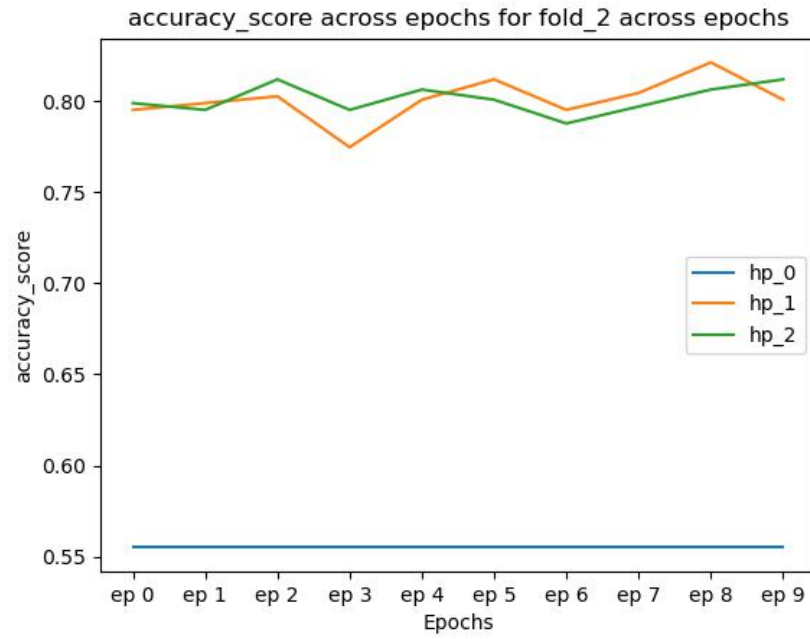
## 5.4 f1_score

|       | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0  | 0.714 | 0.714 | 0.714 | 0.714 | 0.714 | 0.714 | 0.714 | 0.714 | 0.714 | 0.714 |
| hp_1  | 0.828 | 0.831 | 0.820 | 0.779 | 0.824 | 0.831 | 0.800 | 0.831 | 0.839 | 0.809 |
| hp_2  | 0.832 | 0.828 | 0.837 | 0.831 | 0.831 | 0.824 | 0.818 | 0.814 | 0.830 | 0.835 |

f1_score across epochs for fold_2 across epochs
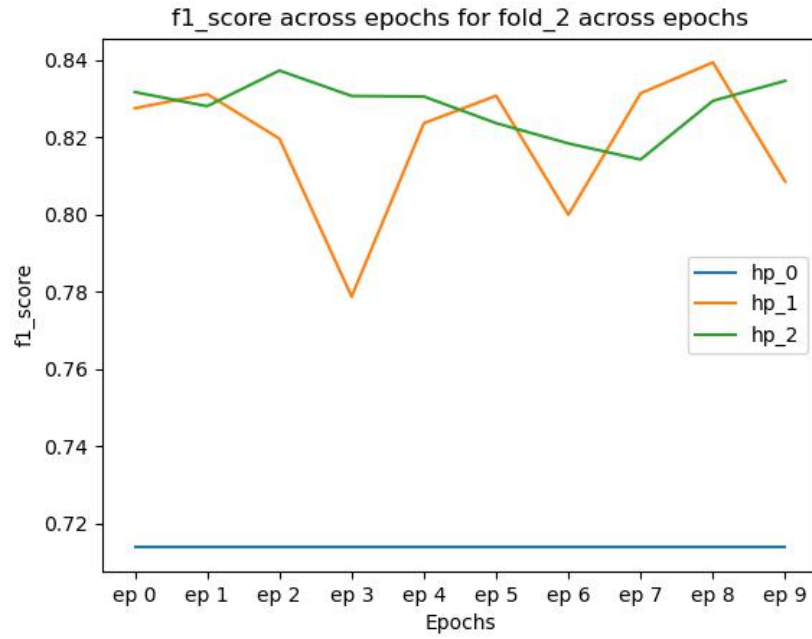
## 5.5 precision_score

|       | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0  | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 | 0.555 |
| hp_1  | 0.776 | 0.778 | 0.831 | 0.855 | 0.809 | 0.829 | 0.873 | 0.797 | 0.837 | 0.866 |
| hp_2  | 0.776 | 0.775 | 0.805 | 0.767 | 0.807 | 0.809 | 0.779 | 0.827 | 0.811 | 0.815 |

precision_score across epochs for fold_2 across epochs
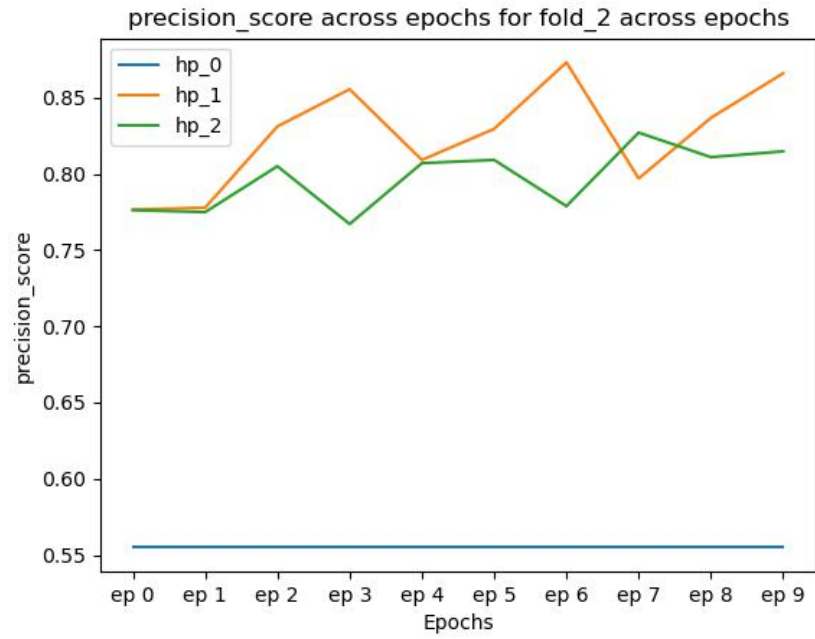
## 5.6 matthews_corrcoef

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| hp_1 | 0.586 | 0.594 | 0.602 | 0.562 | 0.595 | 0.619 | 0.602 | 0.603 | 0.638 | 0.608 |
| hp_2 | 0.594 | 0.586 | 0.618 | 0.589 | 0.606 | 0.595 | 0.569 | 0.591 | 0.606 | 0.618 |

matthews_corrcoef across epochs for fold_2 across epochs
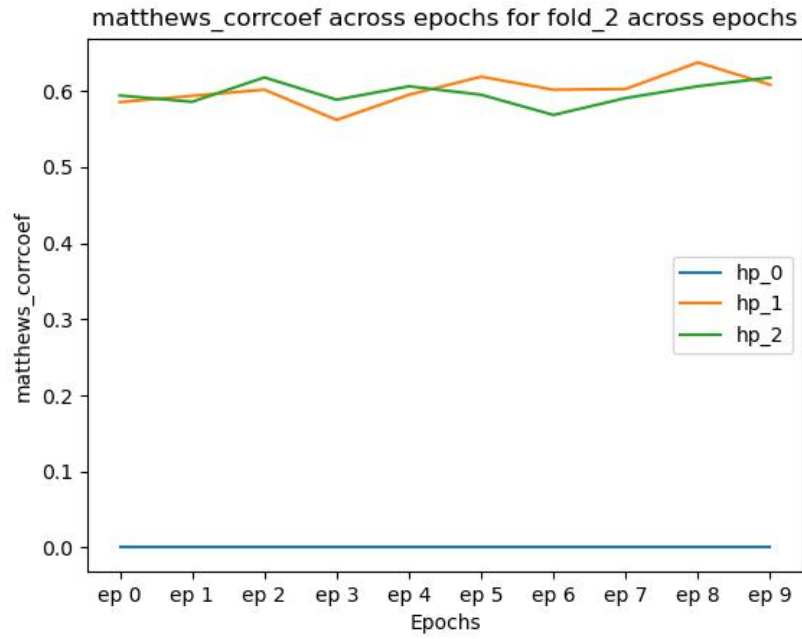
## 5.7 recall_score

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| hp_1 | 0.886 | 0.893 | 0.809 | 0.715 | 0.839 | 0.832 | 0.738 | 0.869 | 0.842 | 0.758 |
| hp_2 | 0.896 | 0.889 | 0.872 | 0.906 | 0.856 | 0.839 | 0.862 | 0.802 | 0.849 | 0.856 |

recall_score across epochs for fold_2 across epochs
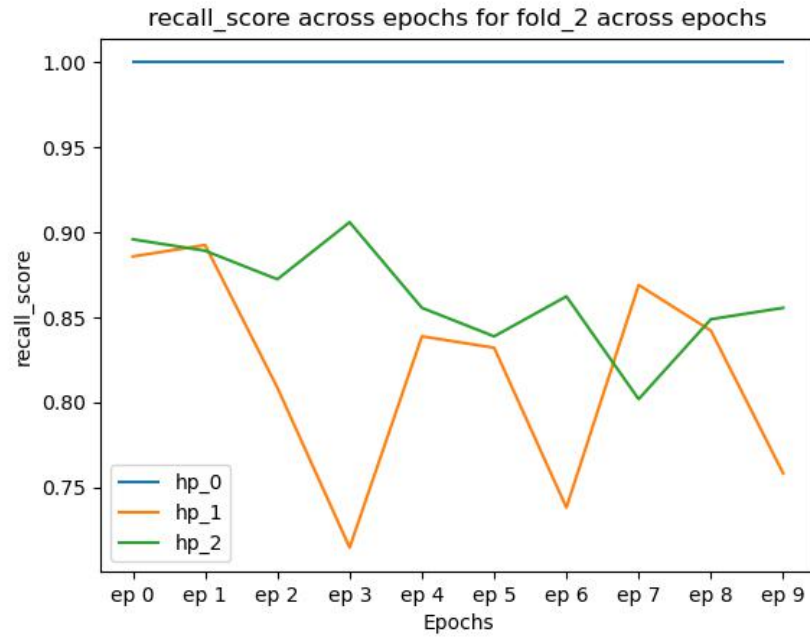
# 6  fold_3

## 6.1  train_loss

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.698 | 0.688 | 0.691 | 0.689 | 0.689 | 0.689 | 0.689 | 0.689 | 0.689 | 0.689 |
| hp_1 | 0.528 | 0.223 | 0.055 | 0.032 | 0.027 | 0.025 | 0.023 | 0.005 | 0.012 | 0.000 |
| hp_2 | 0.555 | 0.270 | 0.059 | 0.017 | 0.028 | 0.014 | 0.012 | 0.009 | 0.001 | 0.000 |

train_loss across epochs for fold_3 across epochs
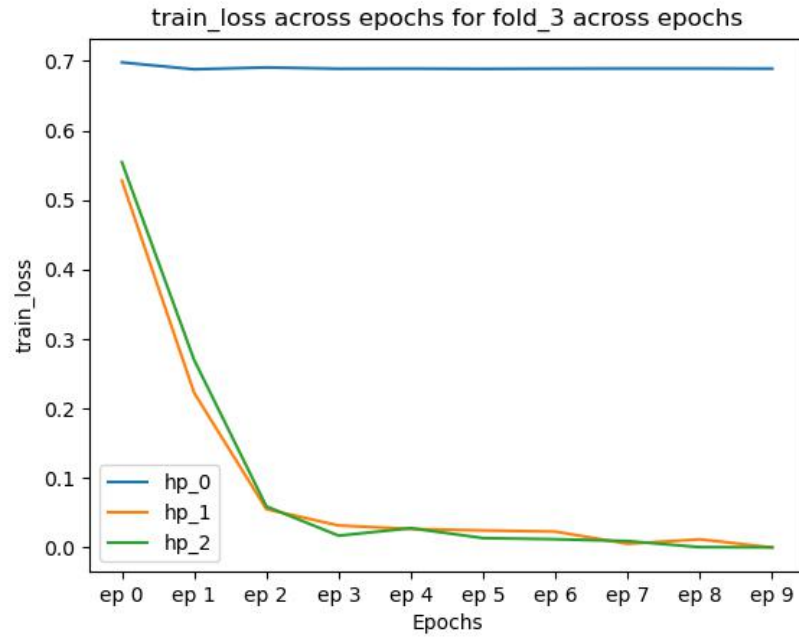
## 6.2   test_loss

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.699 | 0.704 | 0.697 | 0.693 | 0.695 | 0.695 | 0.696 | 0.696 | 0.695 | 0.695 |
| hp_1 | 0.425 | 0.432 | 0.632 | 0.833 | 0.748 | 0.802 | 0.639 | 1.417 | 1.067 | 1.249 |
| hp_2 | 0.439 | 0.442 | 0.696 | 0.858 | 0.774 | 0.943 | 1.039 | 0.999 | 1.294 | 1.528 |

test_loss across epochs for fold_3 across epochs
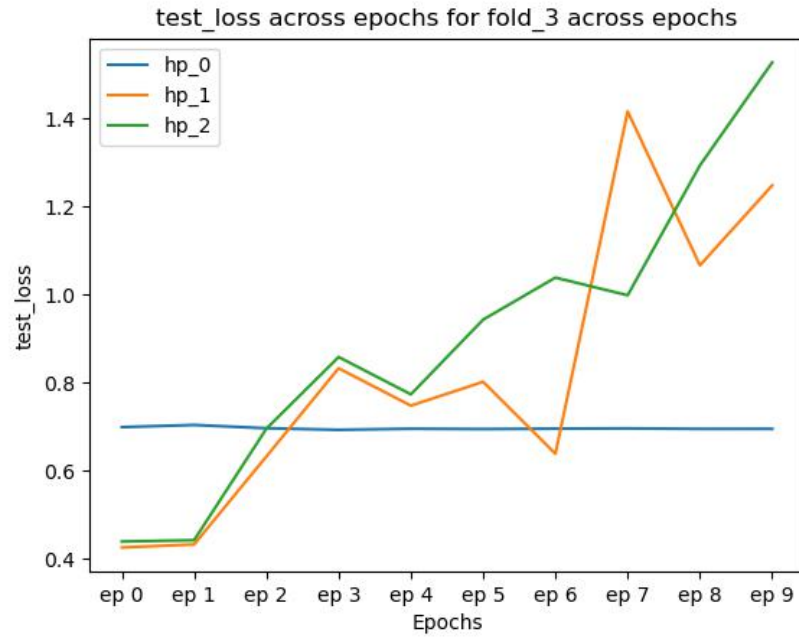
## 6.3 accuracy_score

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 |
| hp_1 | 0.808 | 0.818 | 0.816 | 0.803 | 0.804 | 0.806 | 0.825 | 0.762 | 0.810 | 0.821 |
| hp_2 | 0.804 | 0.803 | 0.788 | 0.788 | 0.799 | 0.814 | 0.791 | 0.786 | 0.788 | 0.784 |

accuracy_score across epochs for fold_3 across epochs
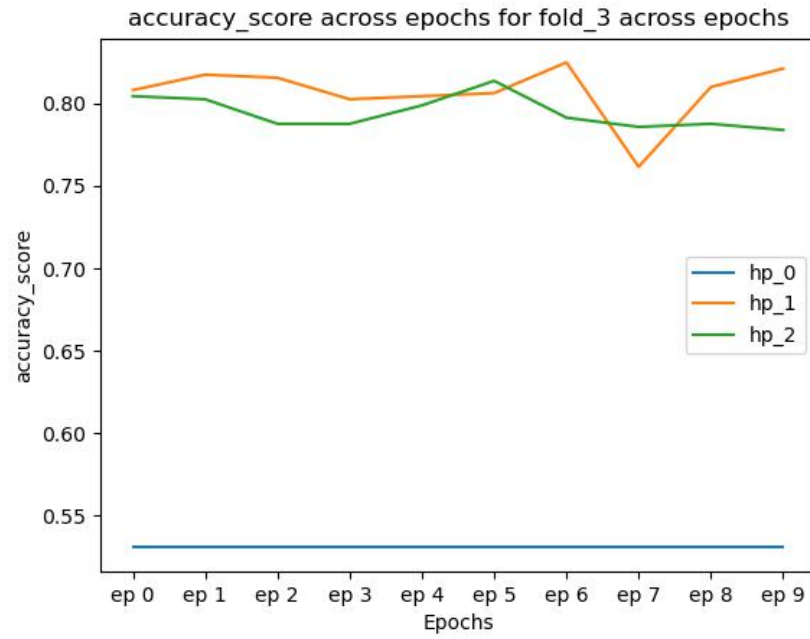
## 6.4 f1_score

|       | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0  | 0.693 | 0.693 | 0.693 | 0.693 | 0.693 | 0.693 | 0.693 | 0.693 | 0.693 | 0.693 |
| hp_1  | 0.834 | 0.825 | 0.827 | 0.820 | 0.830 | 0.810 | 0.834 | 0.734 | 0.815 | 0.846 |
| hp_2  | 0.832 | 0.819 | 0.807 | 0.808 | 0.822 | 0.826 | 0.818 | 0.811 | 0.816 | 0.815 |

f1_score across epochs for fold_3 across epochs
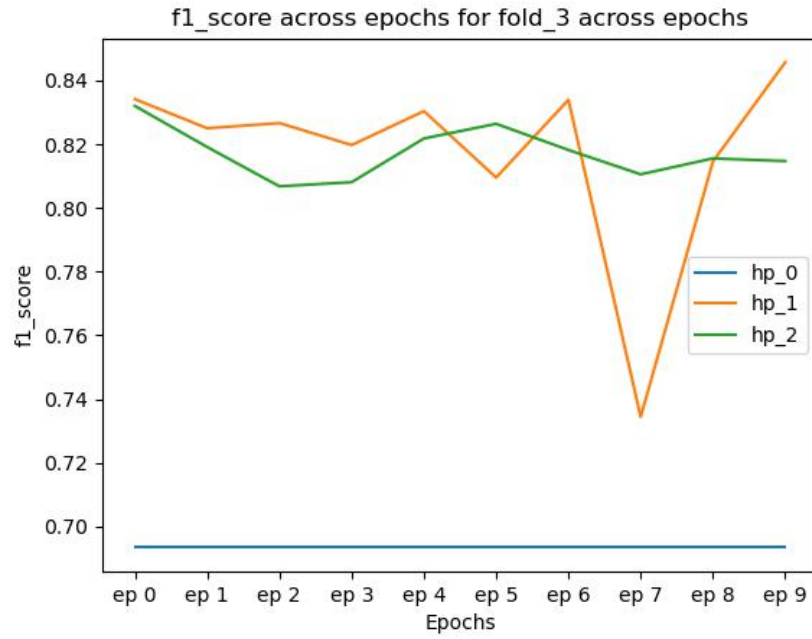
## 6.5  precision_score

|        | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0   | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 | 0.531 |
| hp_1   | 0.771 | 0.840 | 0.825 | 0.795 | 0.769 | 0.847 | 0.840 | 0.898 | 0.845 | 0.780 |
| hp_2   | 0.765 | 0.797 | 0.780 | 0.777 | 0.776 | 0.818 | 0.761 | 0.764 | 0.757 | 0.748 |

precision_score across epochs for fold_3 across epochs
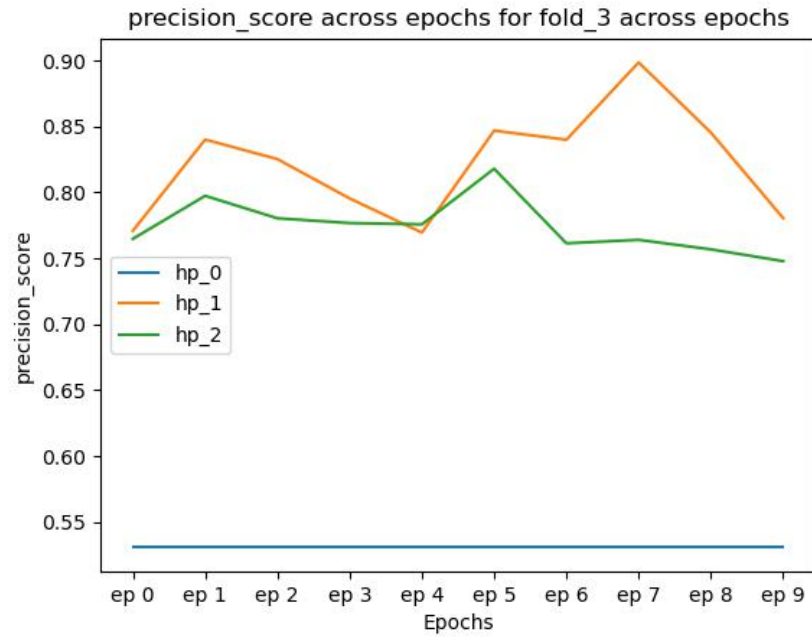
## 6.6 matthews_corrcoef

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| hp_1 | 0.622 | 0.635 | 0.630 | 0.603 | 0.614 | 0.616 | 0.649 | 0.561 | 0.622 | 0.649 |
| hp_2 | 0.616 | 0.603 | 0.573 | 0.574 | 0.598 | 0.626 | 0.586 | 0.572 | 0.579 | 0.574 |

matthews_corrcoef across epochs for fold_3 across epochs
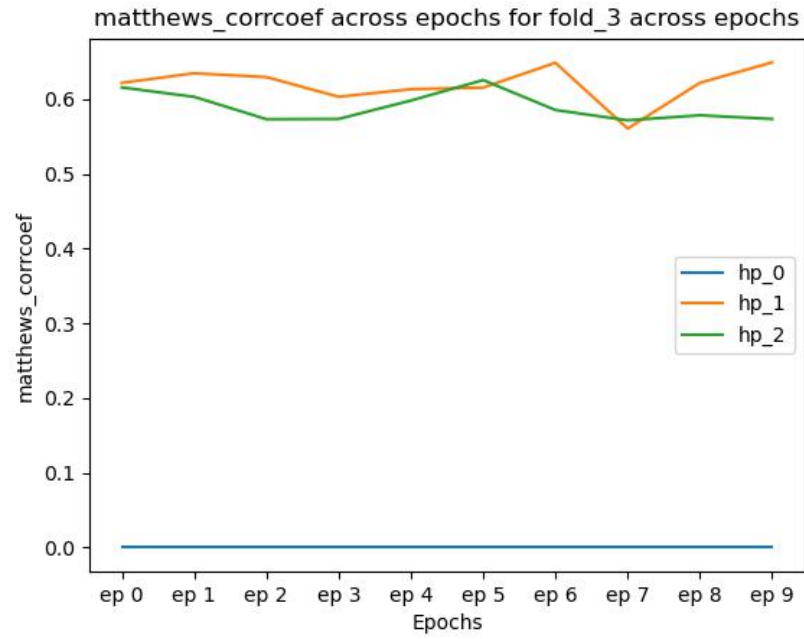
## 6.7 recall_score

|       | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0  | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| hp_1  | 0.909 | 0.811 | 0.828 | 0.846 | 0.902 | 0.775 | 0.828 | 0.621 | 0.786 | 0.923 |
| hp_2  | 0.912 | 0.842 | 0.835 | 0.842 | 0.874 | 0.835 | 0.884 | 0.863 | 0.884 | 0.895 |

recall_score across epochs for fold_3 across epochs
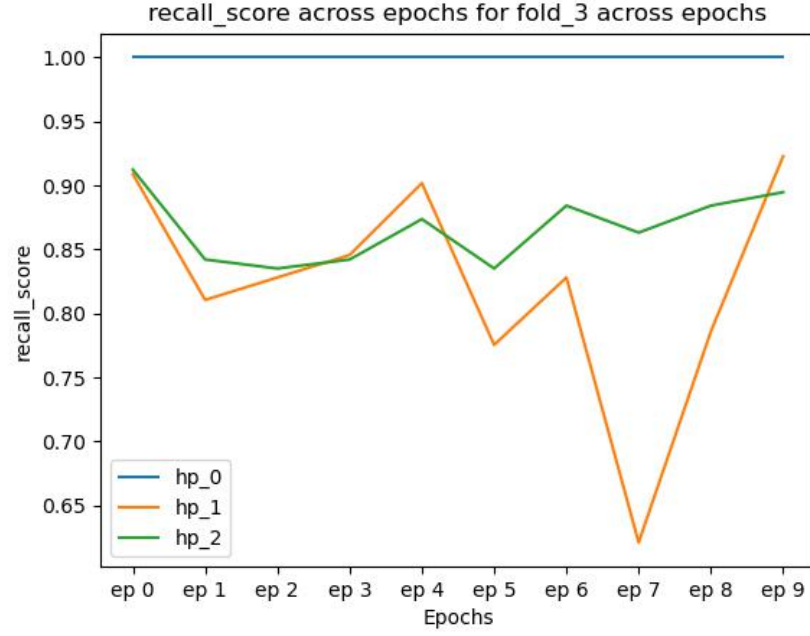
# 7 fold_4

## 7.1 train_loss

|      | ep 0 | ep 1 | ep 2 | ep 3 | ep 4 | ep 5 | ep 6 | ep 7 | ep 8 | ep 9 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.623 | 0.697 | 0.696 | 0.694 | 0.694 | 0.693 | 0.693 | 0.695 | 0.695 | 0.695 |
| hp_1 | 0.517 | 0.238 | 0.051 | 0.029 | 0.026 | 0.015 | 0.017 | 0.014 | 0.014 | 0.017 |
| hp_2 | 0.550 | 0.277 | 0.063 | 0.022 | 0.017 | 0.014 | 0.002 | 0.015 | 0.001 | 0.012 |

train_loss across epochs for fold_4 across epochs
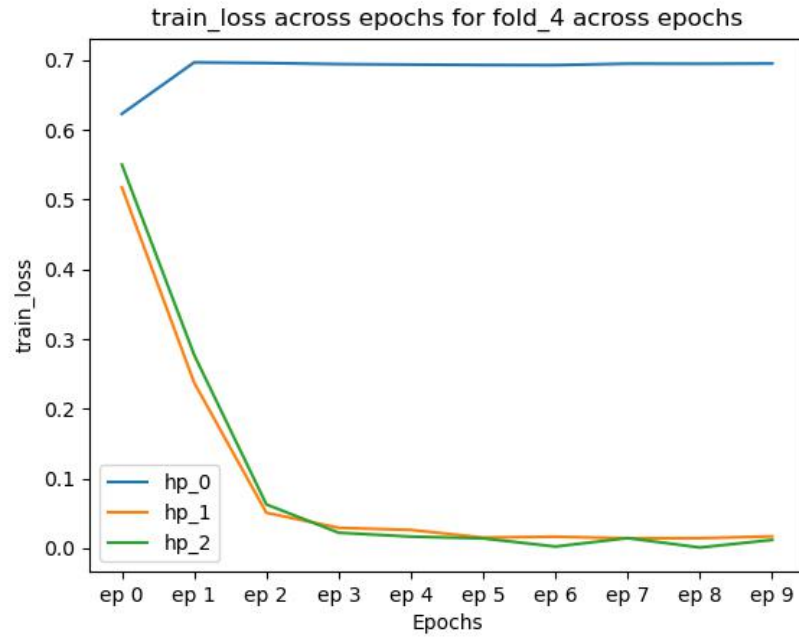
## 7.2   test_loss

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.687 | 0.685 | 0.685 | 0.685 | 0.685 | 0.685 | 0.686 | 0.685 | 0.686 | 0.686 |
| hp_1 | 0.416 | 0.435 | 0.688 | 0.911 | 0.998 | 0.943 | 0.829 | 0.940 | 1.069 | 0.913 |
| hp_2 | 0.432 | 0.415 | 0.752 | 0.882 | 0.971 | 0.944 | 1.032 | 1.027 | 1.270 | 1.007 |

test_loss across epochs for fold_4 across epochs
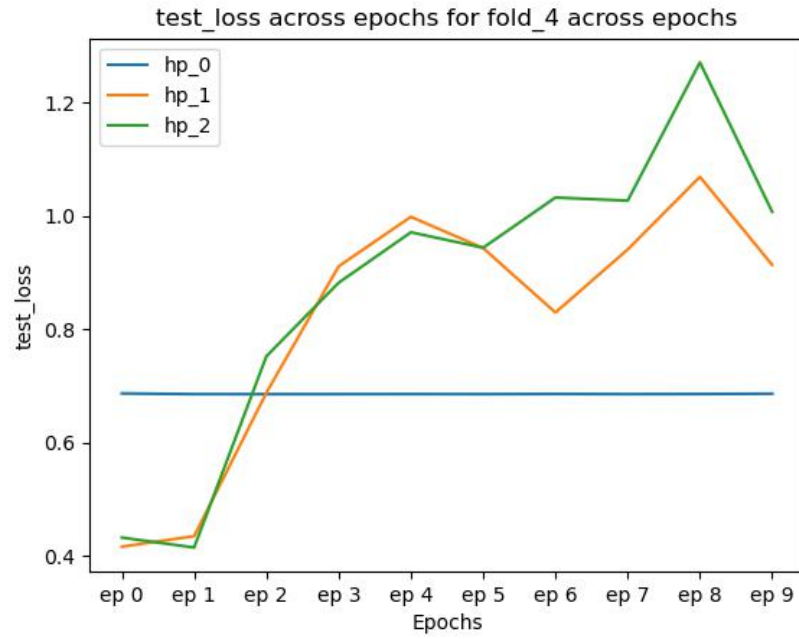
## 7.3 accuracy_score

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 |
| hp_1 | 0.831 | 0.844 | 0.816 | 0.791 | 0.819 | 0.808 | 0.804 | 0.804 | 0.797 | 0.827 |
| hp_2 | 0.810 | 0.838 | 0.803 | 0.803 | 0.818 | 0.819 | 0.834 | 0.823 | 0.821 | 0.818 |

accuracy_score across epochs for fold_4 across epochs
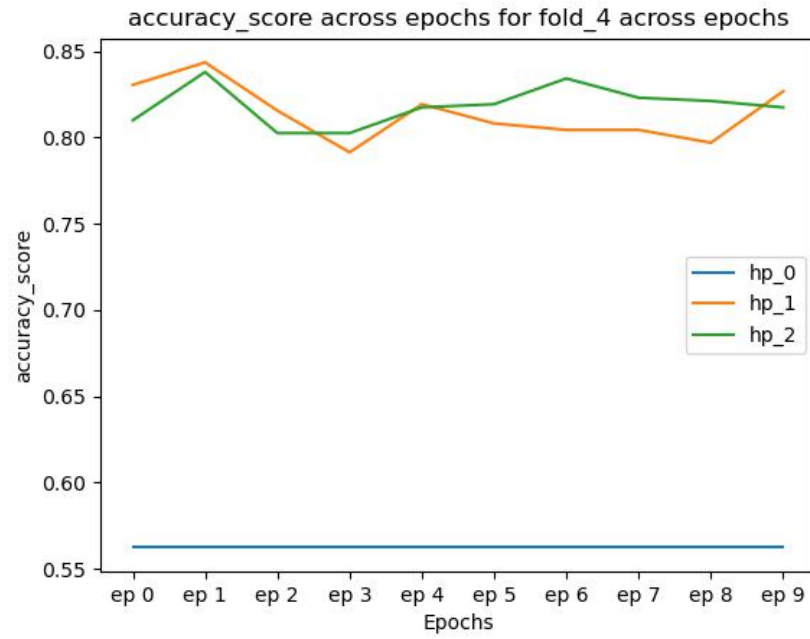
## 7.4  f1_score

|        | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0   | 0.720 | 0.720 | 0.720 | 0.720 | 0.720 | 0.720 | 0.720 | 0.720 | 0.720 | 0.720 |
| hp_1   | 0.855 | 0.864 | 0.848 | 0.836 | 0.854 | 0.843 | 0.831 | 0.839 | 0.829 | 0.857 |
| hp_2   | 0.843 | 0.859 | 0.839 | 0.839 | 0.848 | 0.852 | 0.859 | 0.852 | 0.841 | 0.845 |

f1_score across epochs for fold_4 across epochs
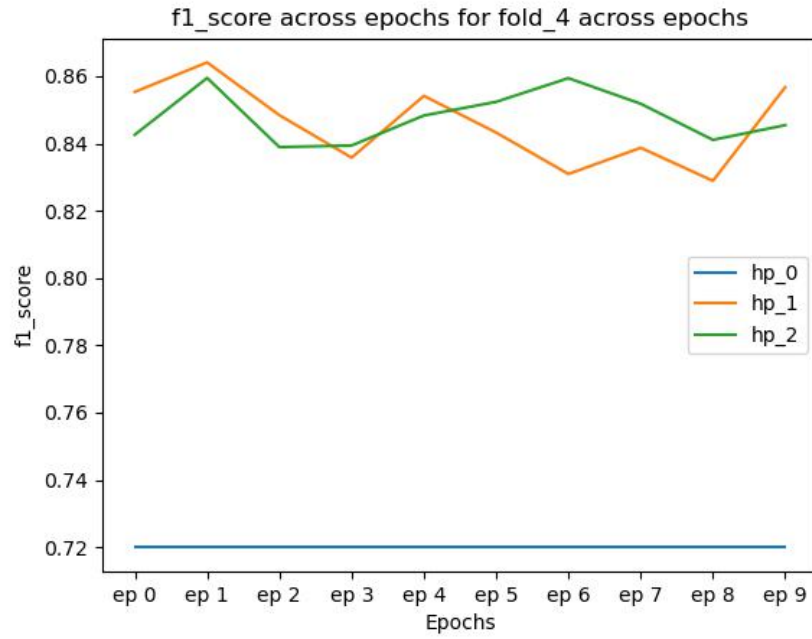
## 7.5 precision_score

|      | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 | 0.562 |
| hp_1 | 0.823 | 0.845 | 0.789 | 0.750 | 0.782 | 0.780 | 0.809 | 0.782 | 0.788 | 0.801 |
| hp_2 | 0.789 | 0.839 | 0.775 | 0.774 | 0.797 | 0.789 | 0.822 | 0.805 | 0.841 | 0.807 |

precision_score across epochs for fold_4 across epochs
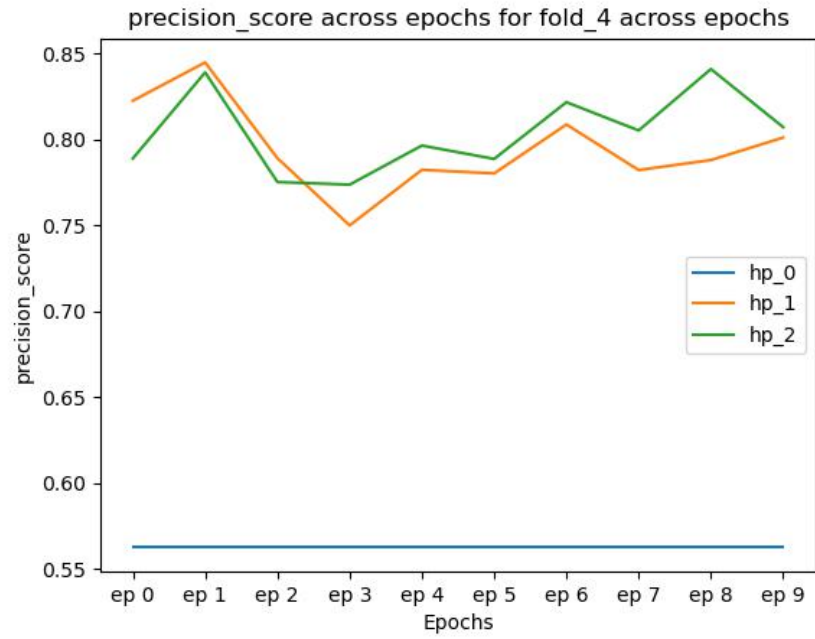
## 7.6 matthews_corrcoef

|       | ep 0  | ep 1  | ep 2  | ep 3  | ep 4 | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| hp_0  | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| hp_1  | 0.655 | 0.681 | 0.628 | 0.588 | 0.64 | 0.613 | 0.601 | 0.604 | 0.586 | 0.650 |
| hp_2  | 0.615 | 0.670 | 0.602 | 0.603 | 0.63 | 0.637 | 0.663 | 0.641 | 0.637 | 0.628 |

matthews_corrcoef across epochs for fold_4 across epochs
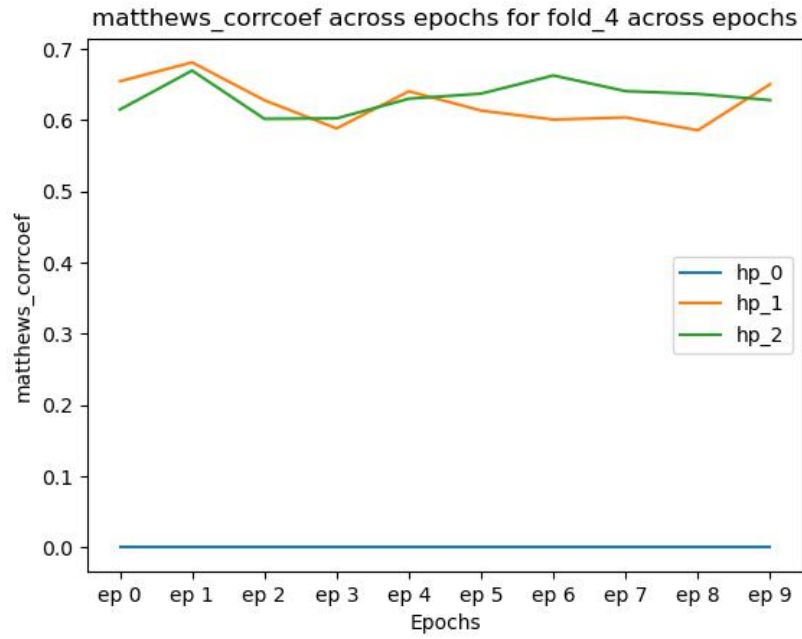
## 7.7    recall_score

|        | ep 0  | ep 1  | ep 2  | ep 3  | ep 4  | ep 5  | ep 6  | ep 7  | ep 8  | ep 9  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| hp_0   | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| hp_1   | 0.891 | 0.884 | 0.917 | 0.944 | 0.940 | 0.917 | 0.854 | 0.904 | 0.874 | 0.921 |
| hp_2   | 0.904 | 0.881 | 0.914 | 0.917 | 0.907 | 0.927 | 0.901 | 0.904 | 0.841 | 0.887 |

recall_score across epochs for fold_4 across epochs