

Assignment 4 submission - Part 1

Scaler used	Training accuracy	validation accuracy	Overfitting seen
StandardScaler	96%	96%	No
MinMaxScaler	91%	88%	Yes
No Scaler	56%	56%	No

After Hyperparameter Tuning

Scaler used	Training accuracy	validation accuracy	Overfitting seen
StandardScaler	100%	98%	Yes
MinMaxScaler	100%	100%	No
No scaler	100%	96%	Yes

Best parameters

- C : 1000
- Class weight : None
- fit_intercept : True
- Max_iter : 100
- penalty : l2
- solver : newton-cg
- tol : 0.0001

1. Before Hyperparameter tuning, the standard scaler model was doing good but after overfitting was seen so I decided to use hyperparameter tuning on other models.
2. As we can see the model in which we used MinMaxScaler is doing excellent after Hyperparameter tuning.
3. **Note** :- Our model achieved 100% accuracy on both training and validation set is probably because our dataset is too simple with only 4 input features and only 240 instances.