

## Hyperparameters

- N\_estimators: 100
- Max\_depth: 10
- Min\_samples\_split: 2
- Min\_samples\_leaf: 1
- Max\_features: sqrt
- Max\_samples: 75 %
- Bootstrap: True
- N\_Bins: 2, 5, 10, 25, 50, 75, 100

## Datasets Classification

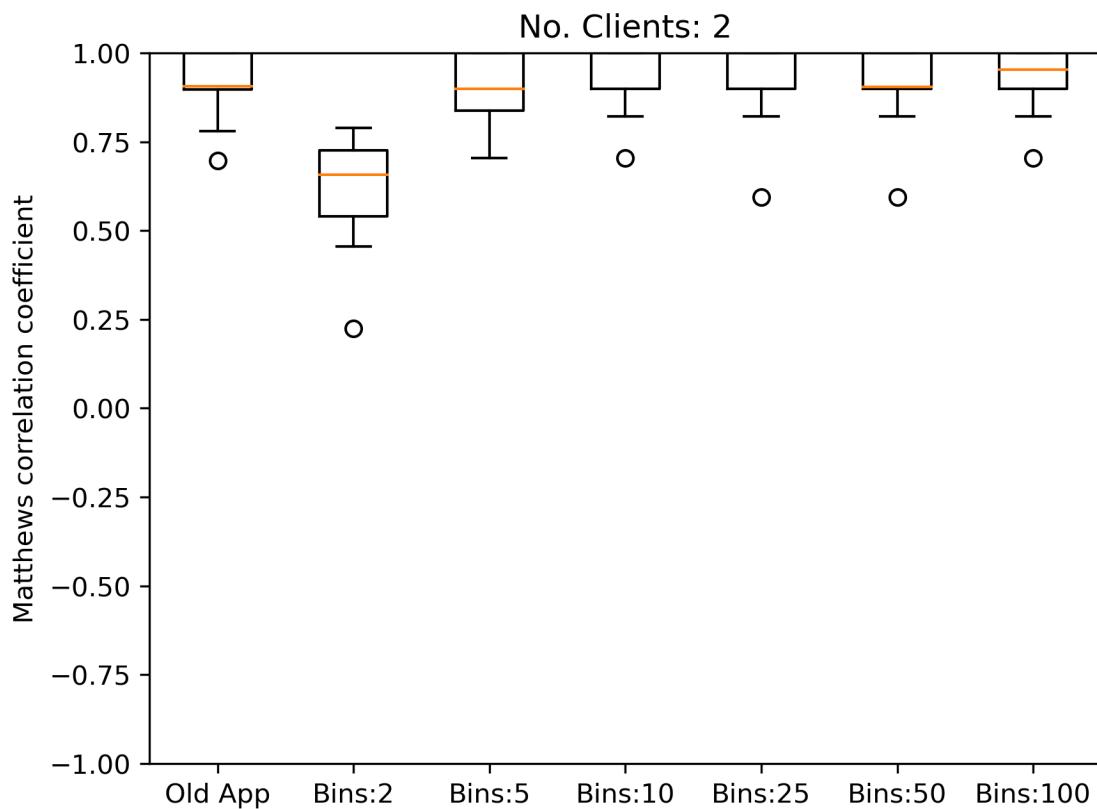
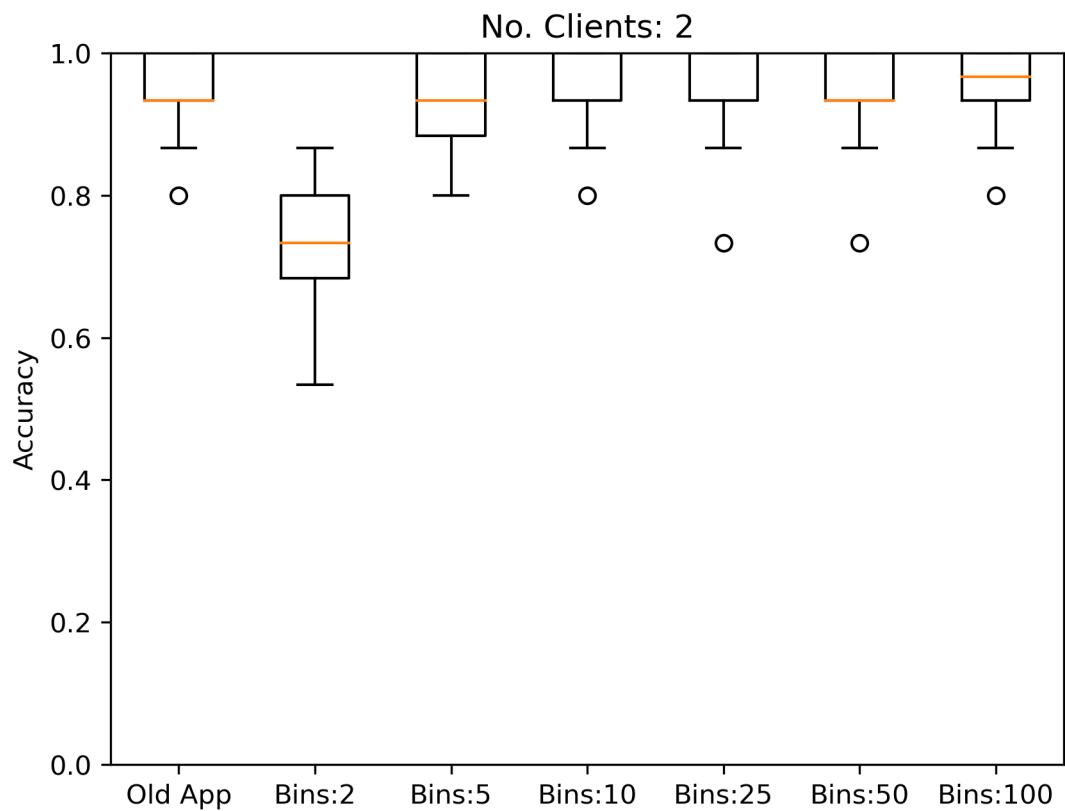
Datasets used to evaluate the performance of FL methods

Name	No. of samples	Disease	Classes	No. of variables
Iris	150	-	3	4 numeric
BCD	569	Breast Cancer	Malignant: 212 / benign: 357	30 numeric

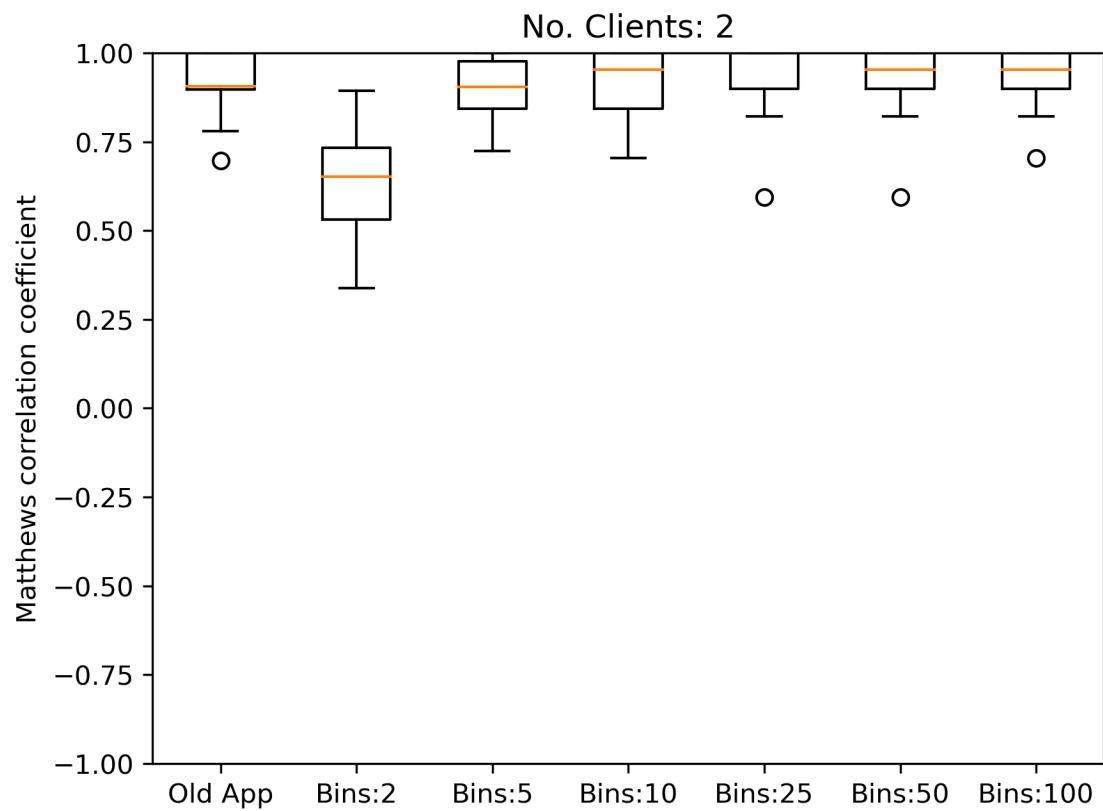
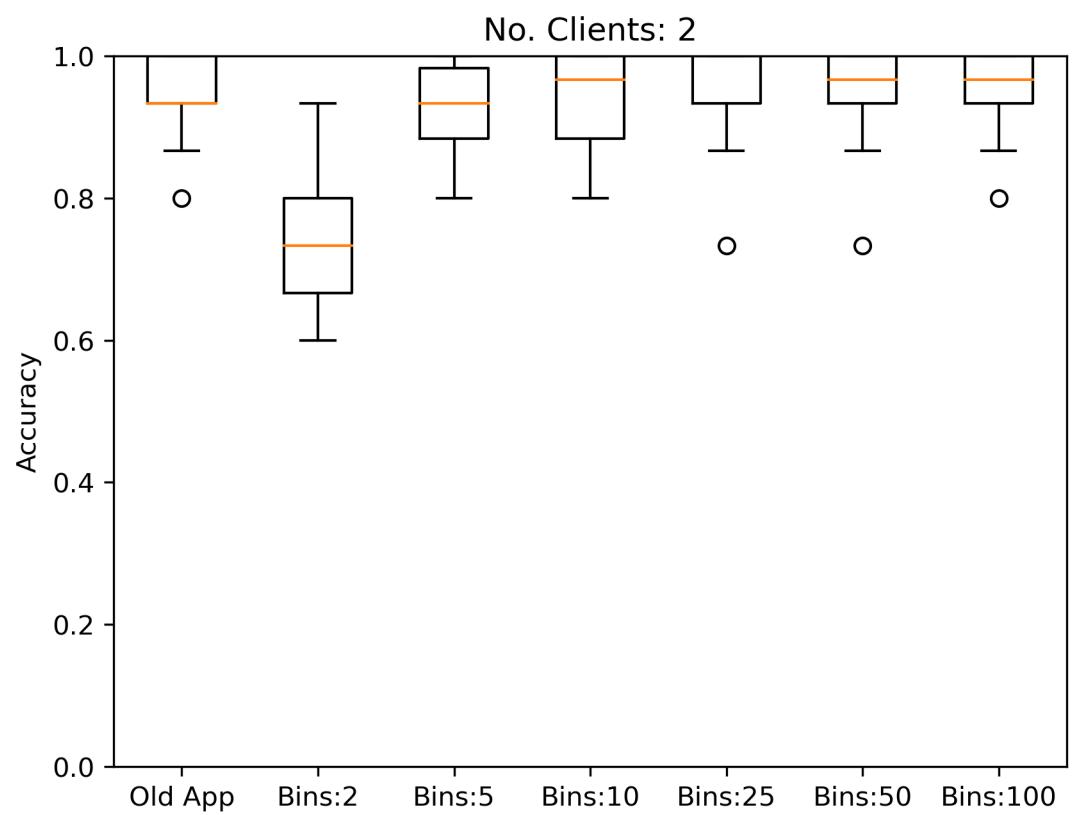
## Iris Dataset

2 Clients

Old App vs New Fixed Width App:

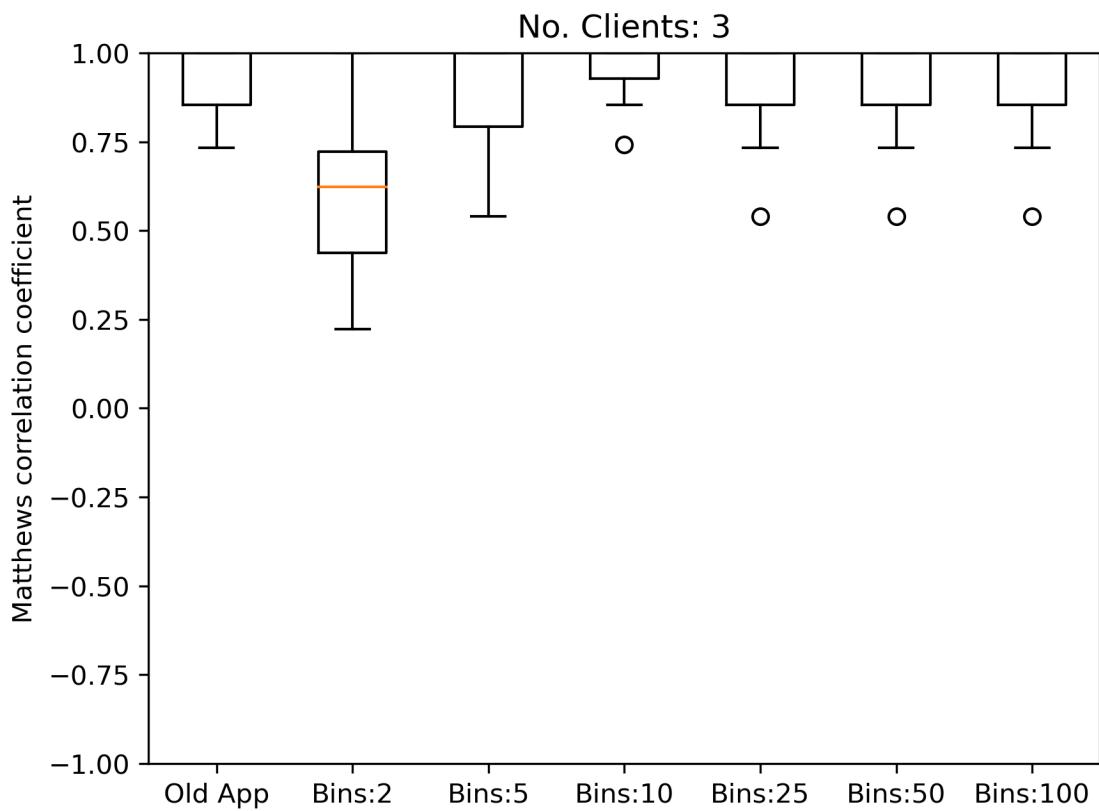
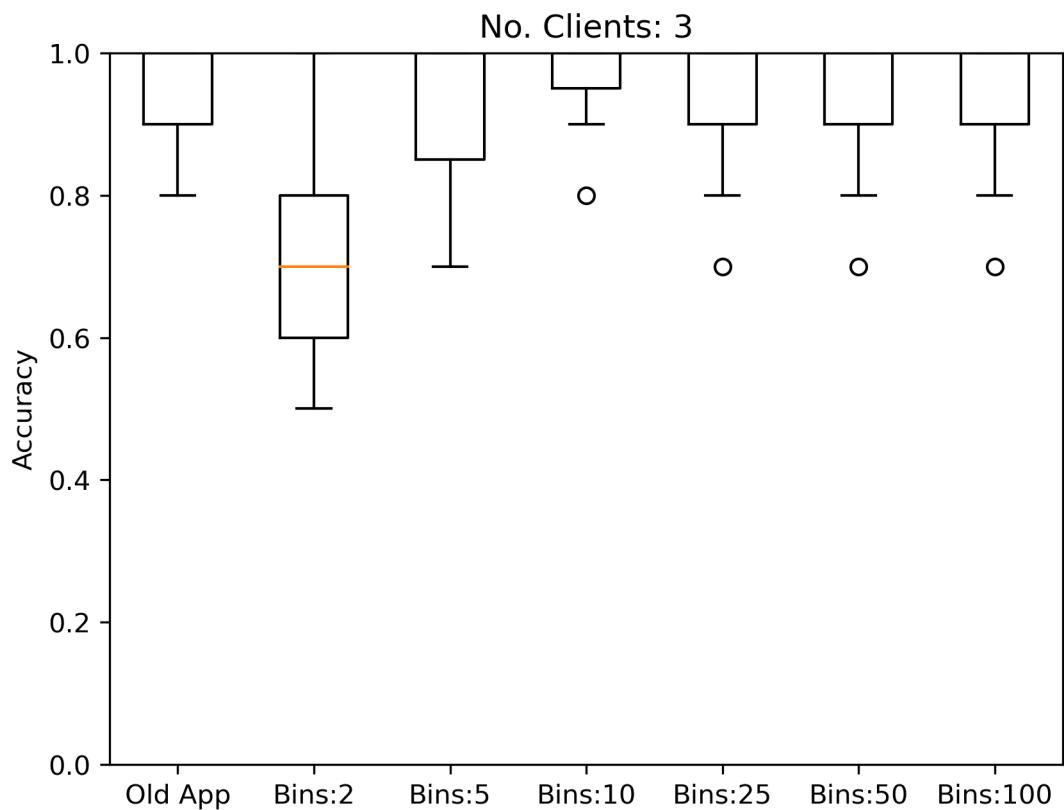


**Old App vs Quantile App:**

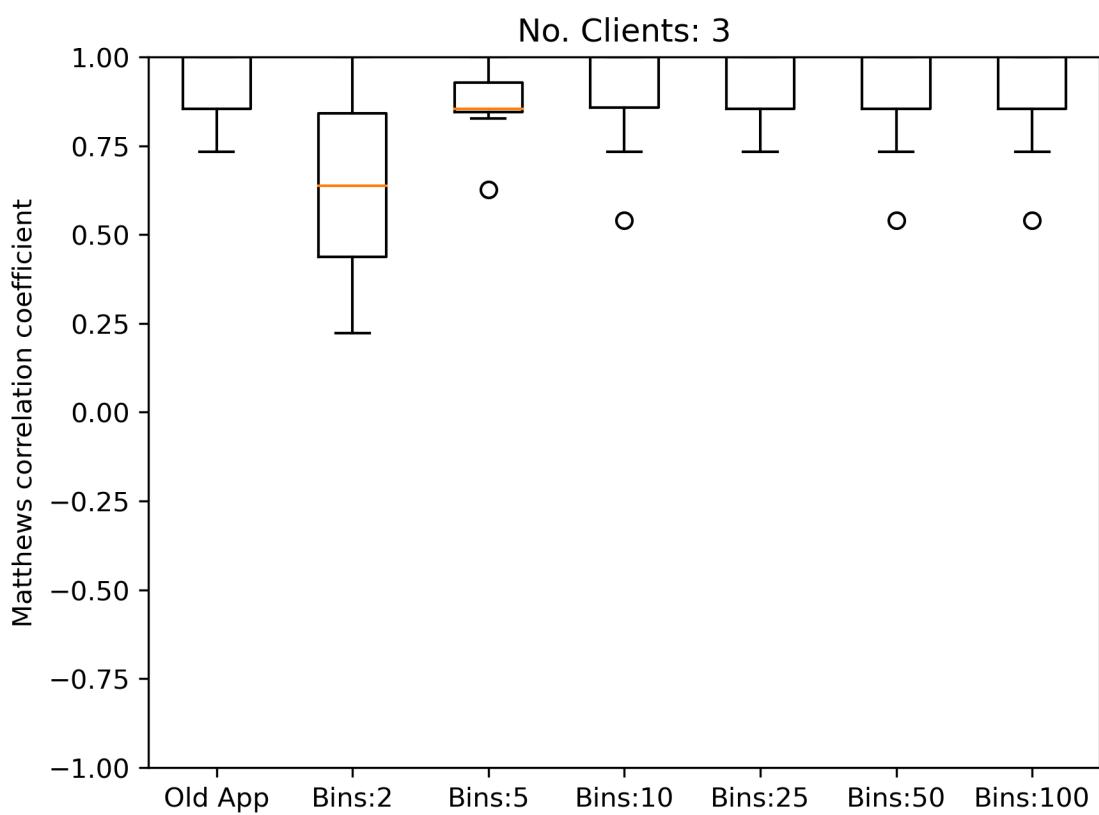
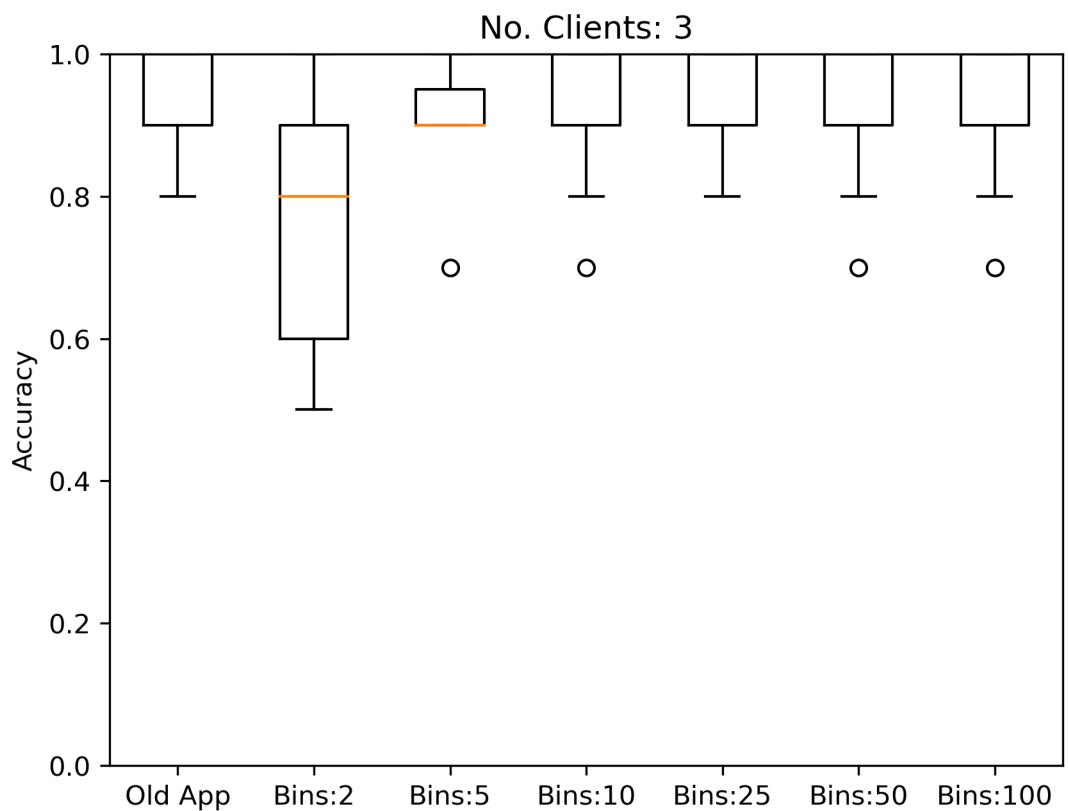


### 3 Clients

**Old App vs New Fixed Width App:**

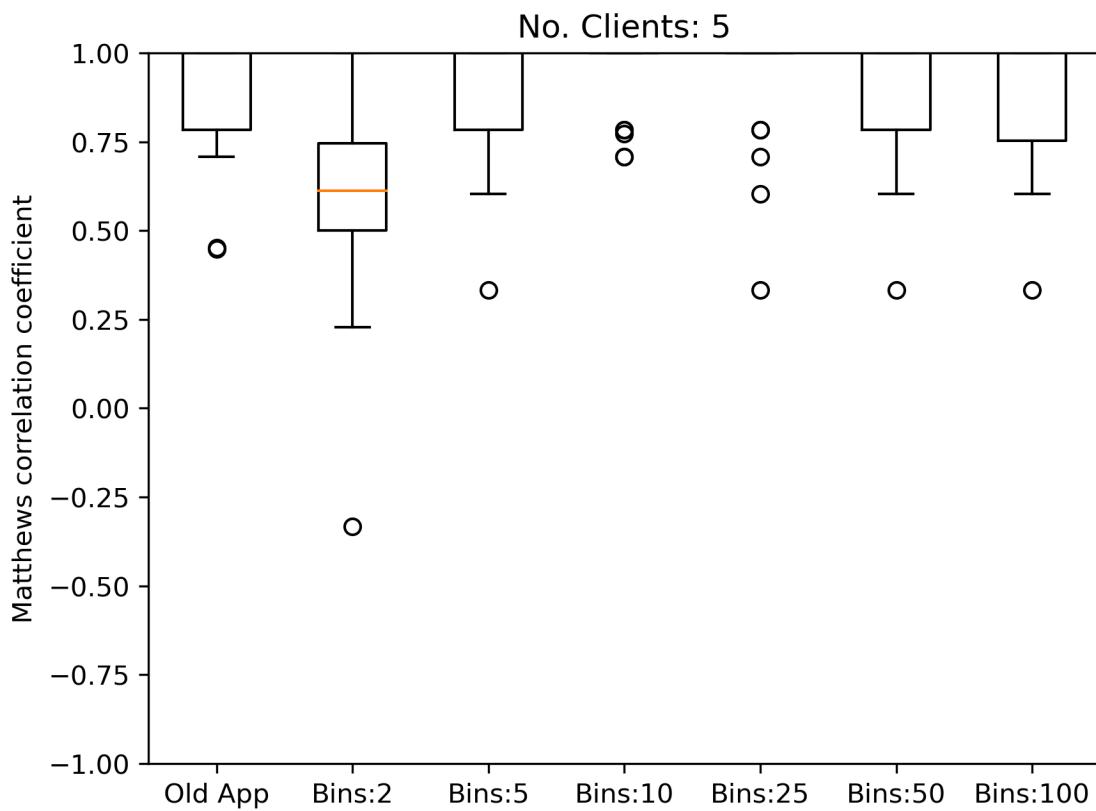
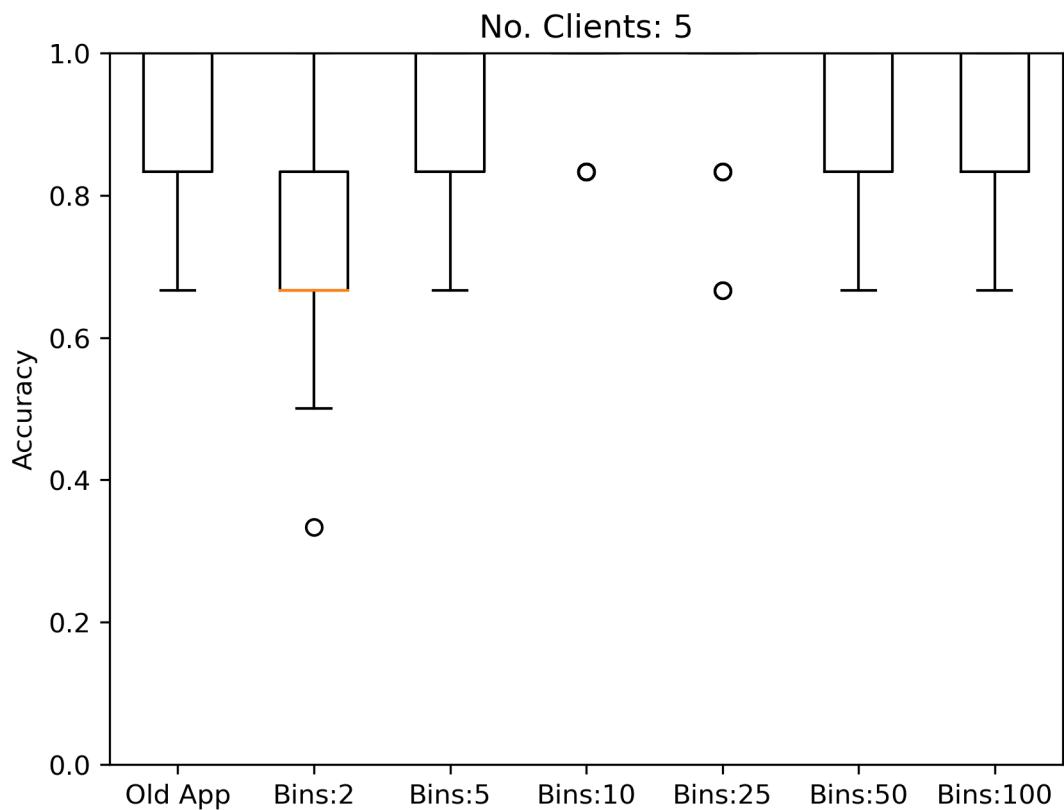


### Old App vs Quantile App:

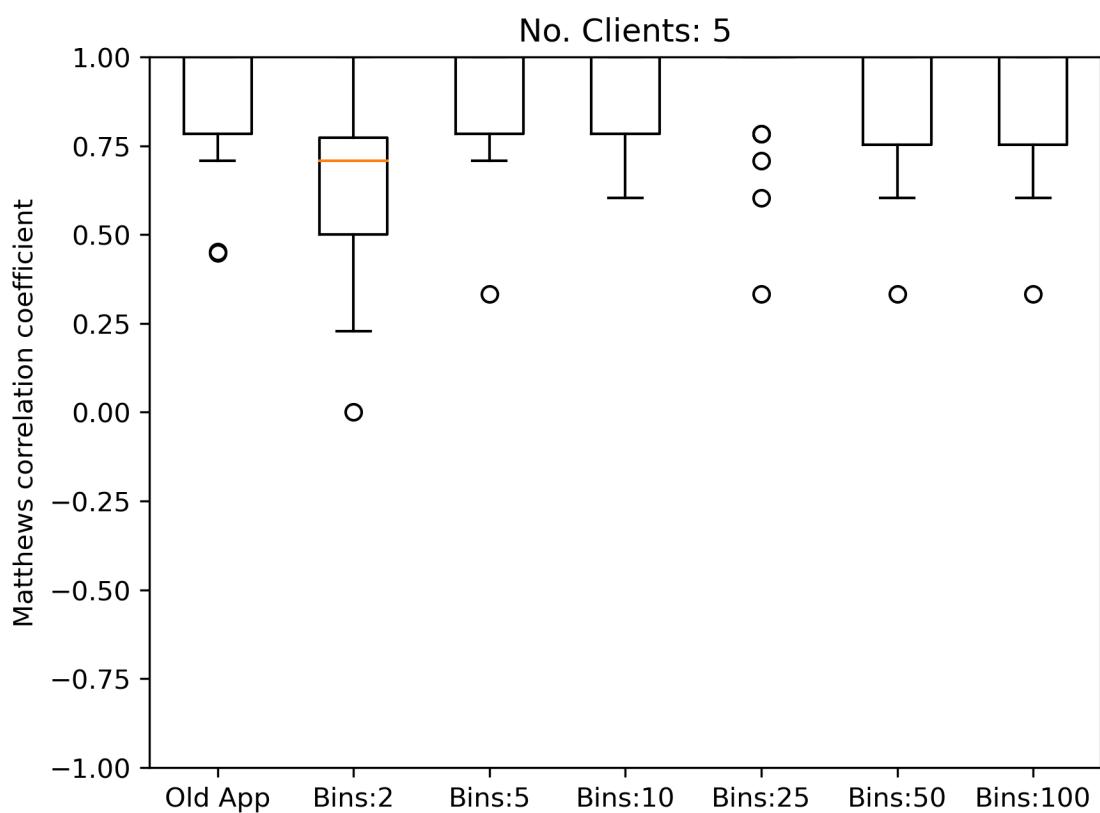
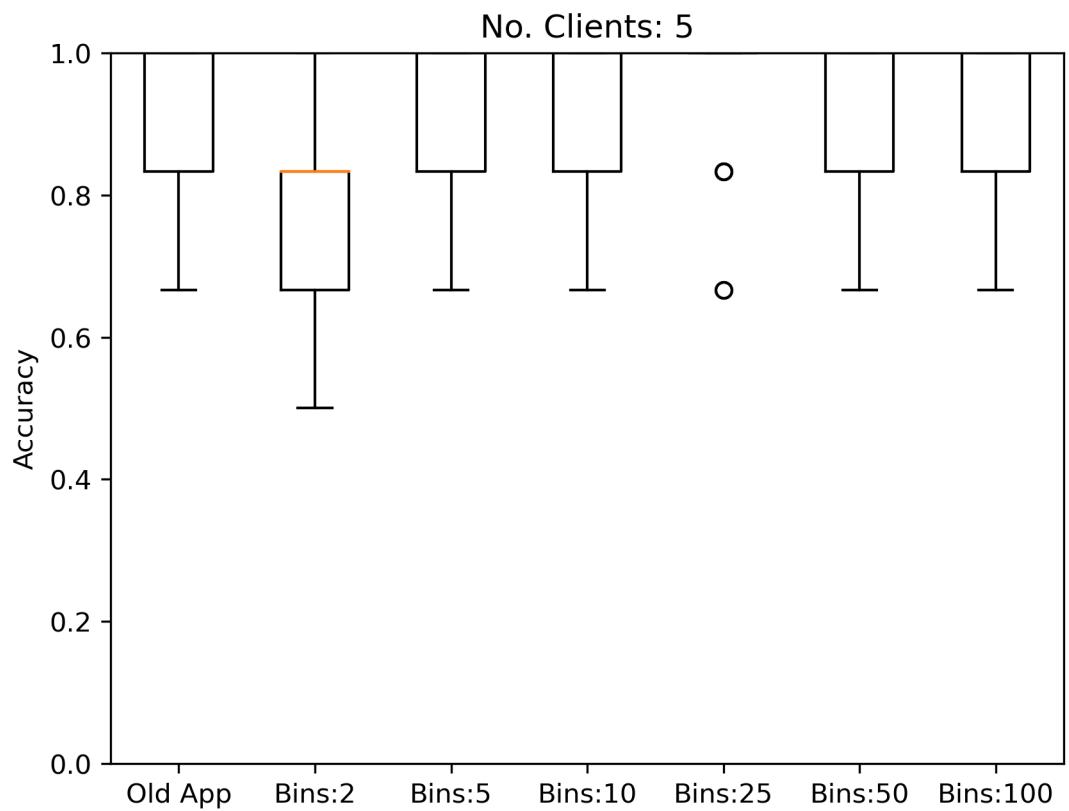


## 5 Clients

**Old App vs New Fixed Width App:**



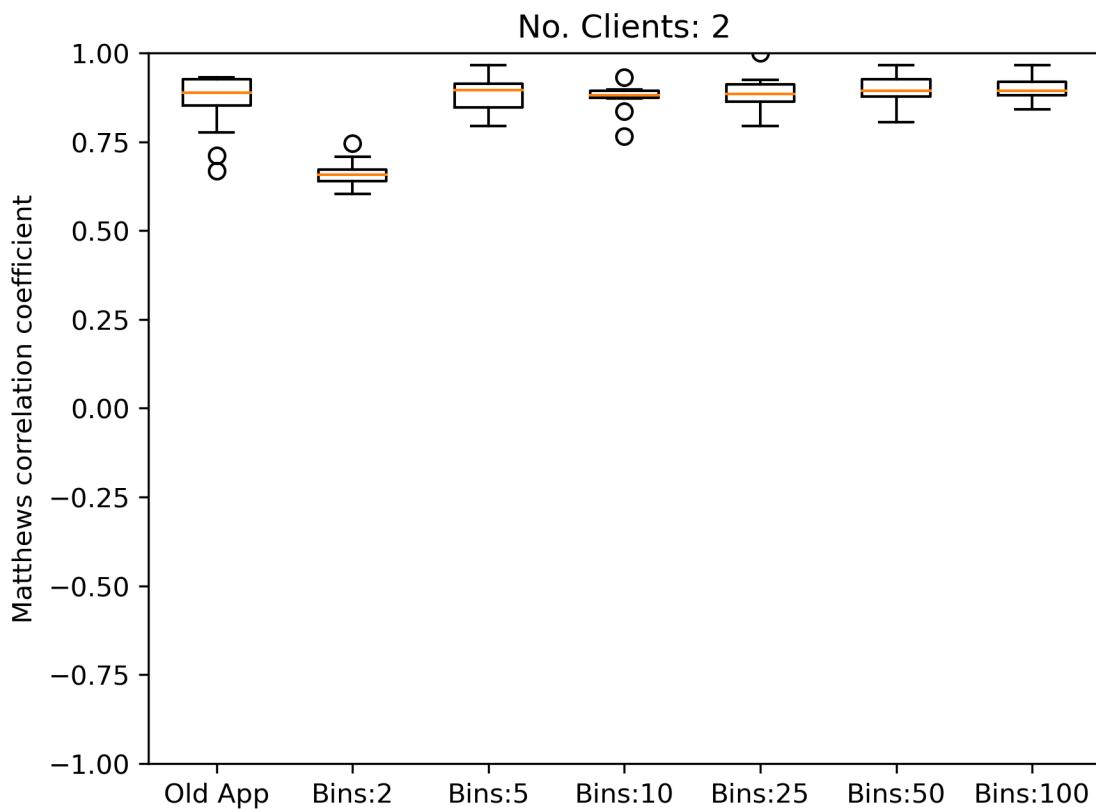
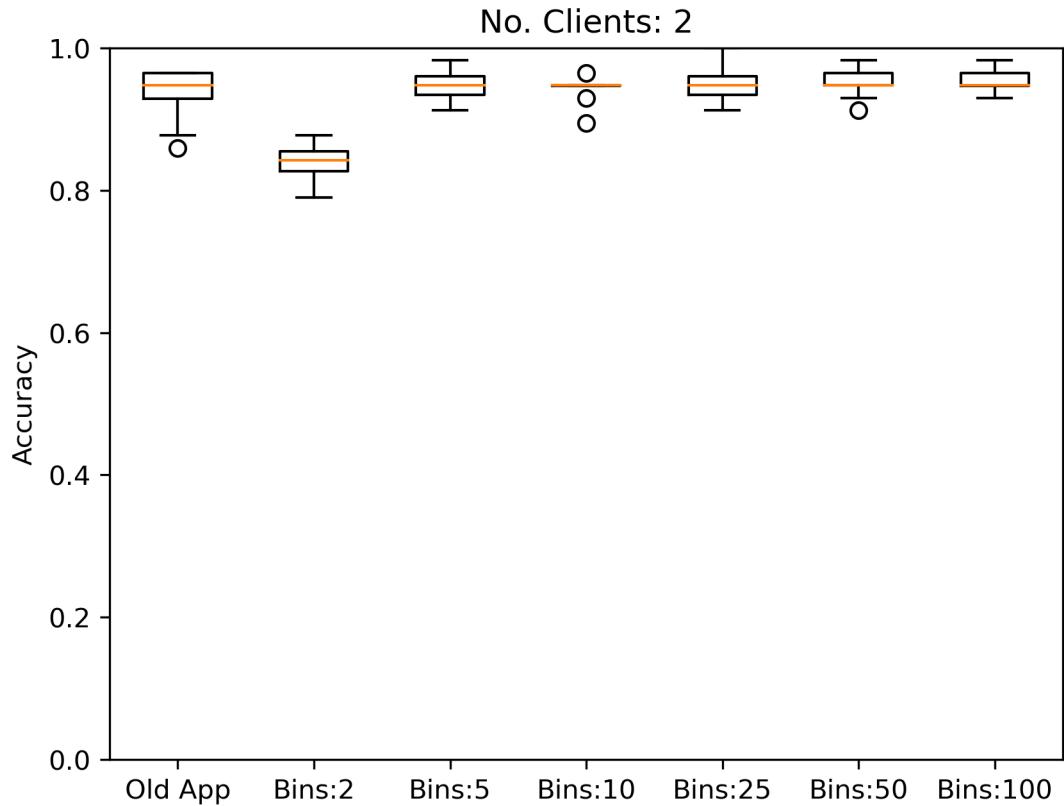
### Old App vs Quantile App:



## Breast Cancer Dataset

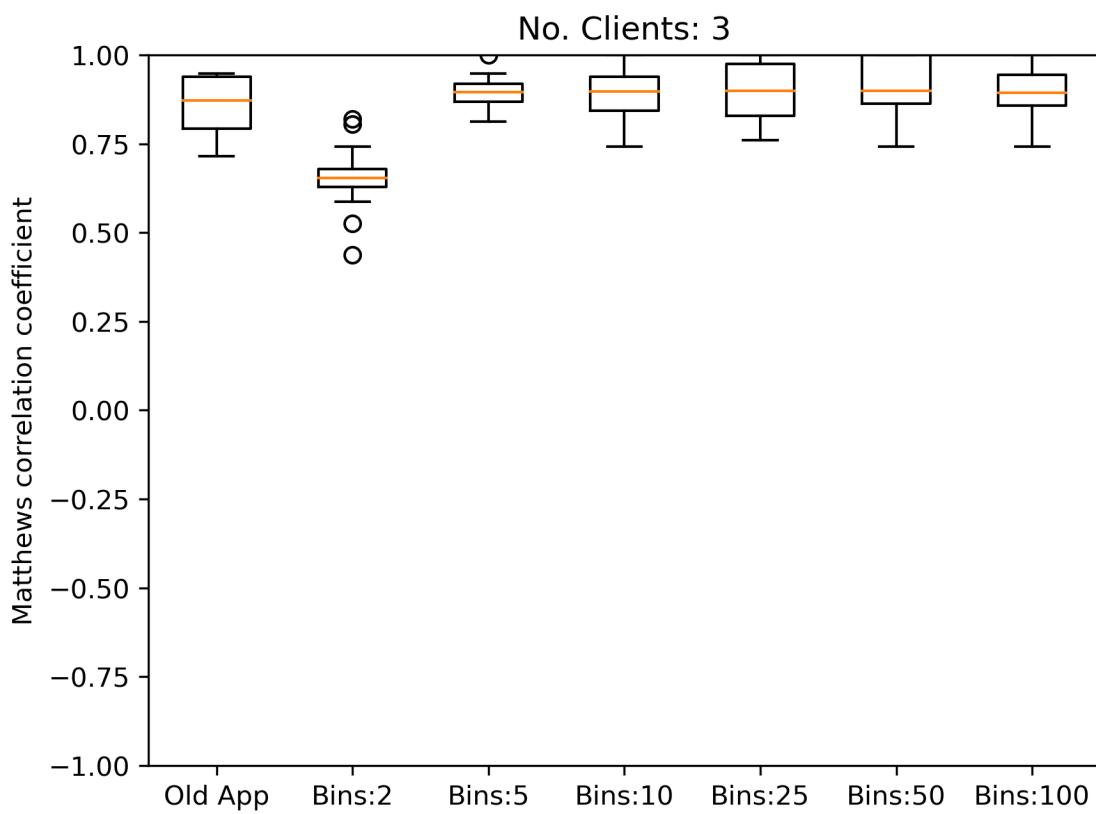
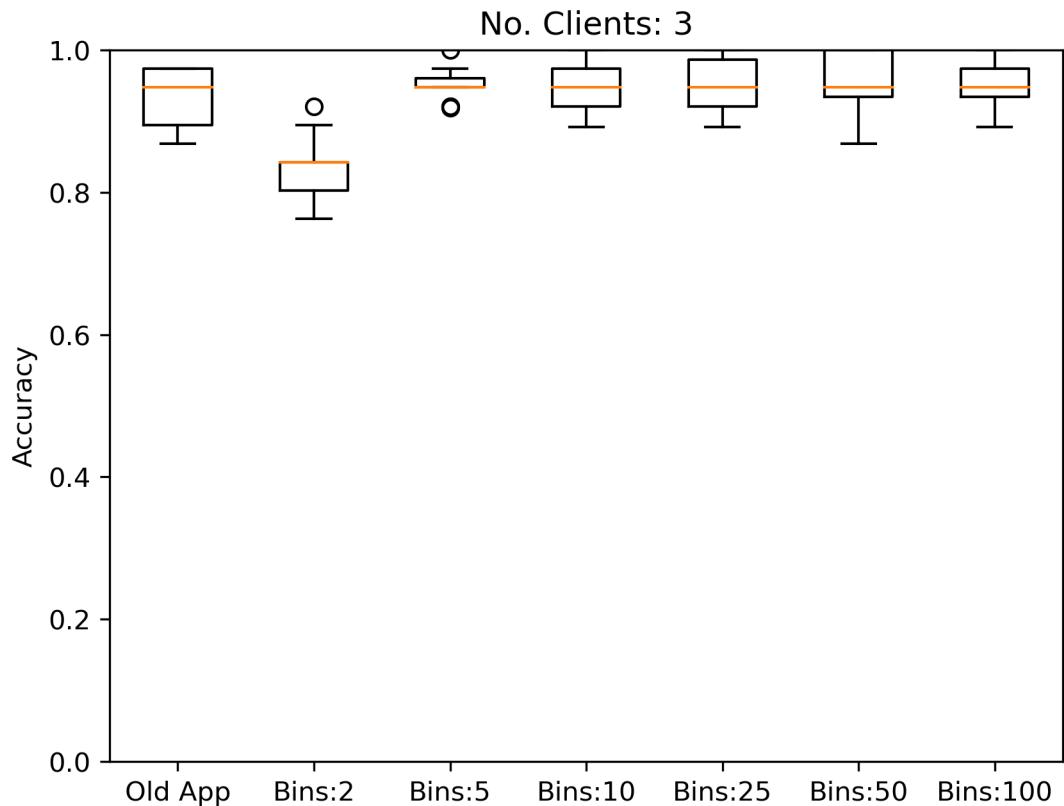
2 Clients

Old App vs New Fixed Width App:



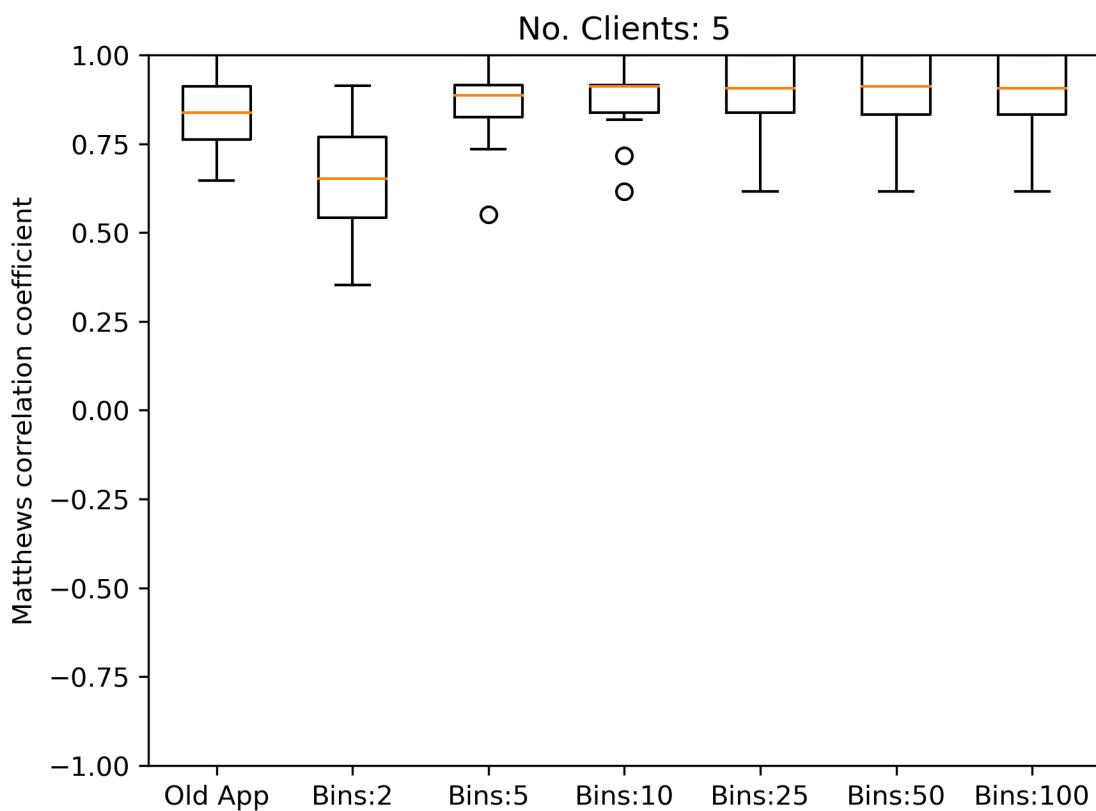
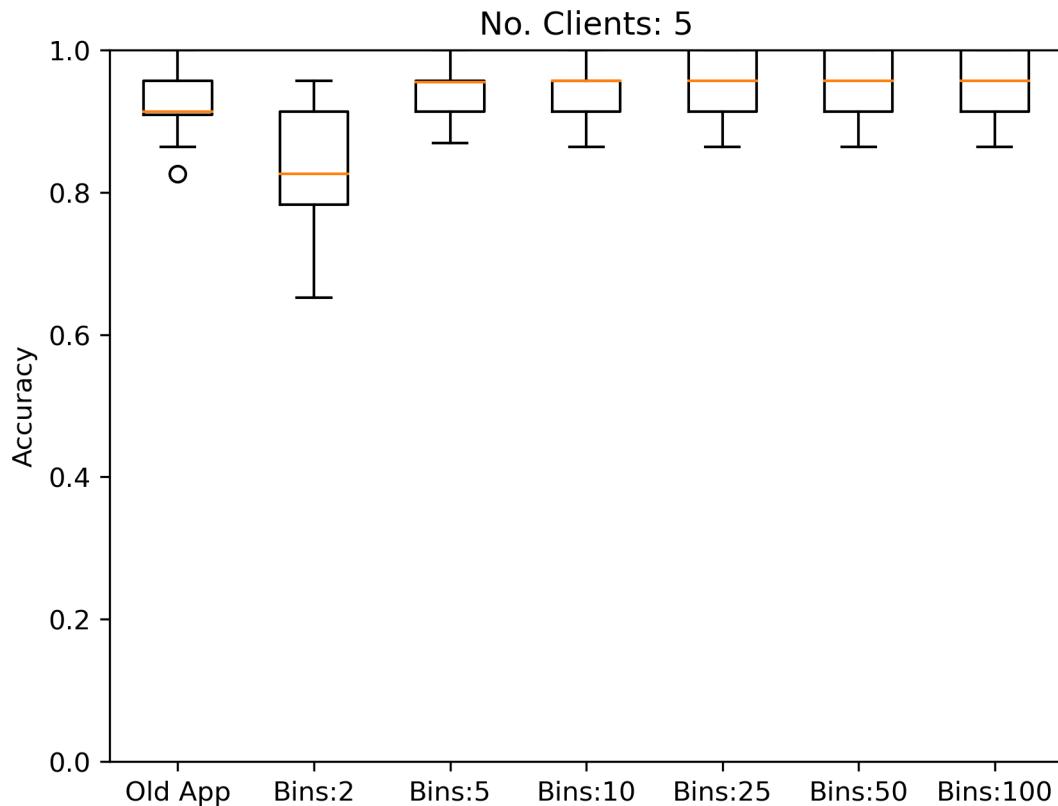
### 3 Clients

**Old App vs New Fixed Width App:**

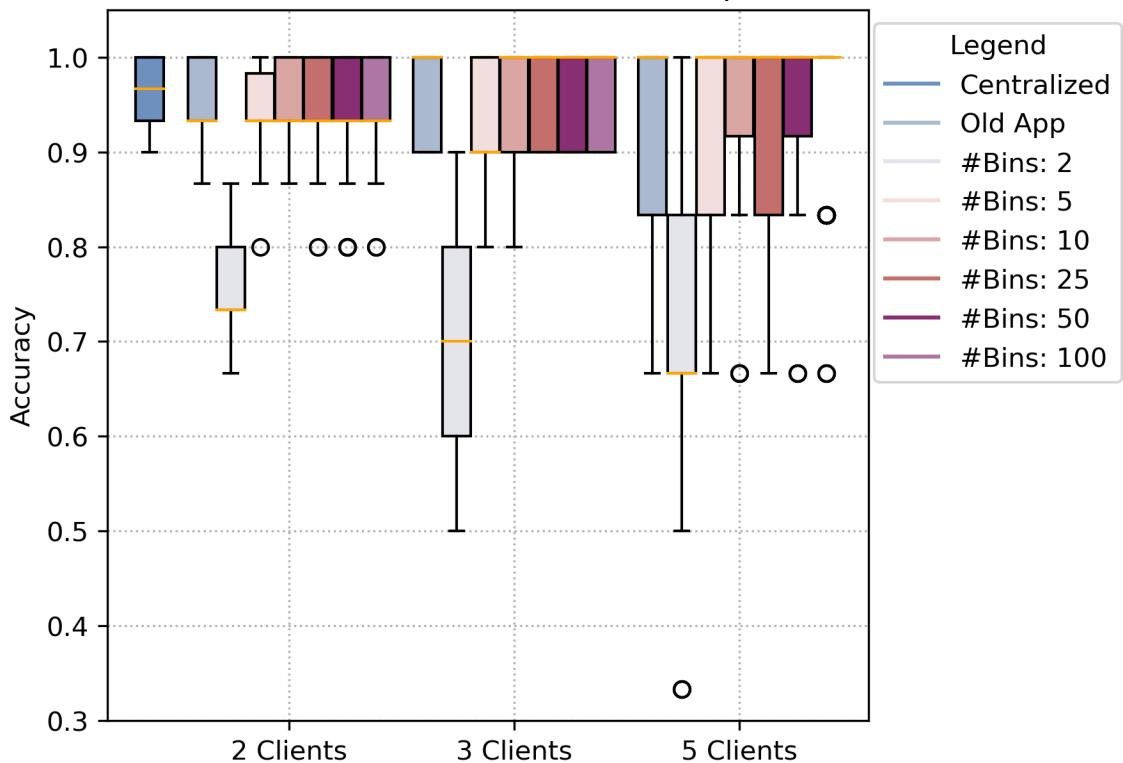


## 5 Clients

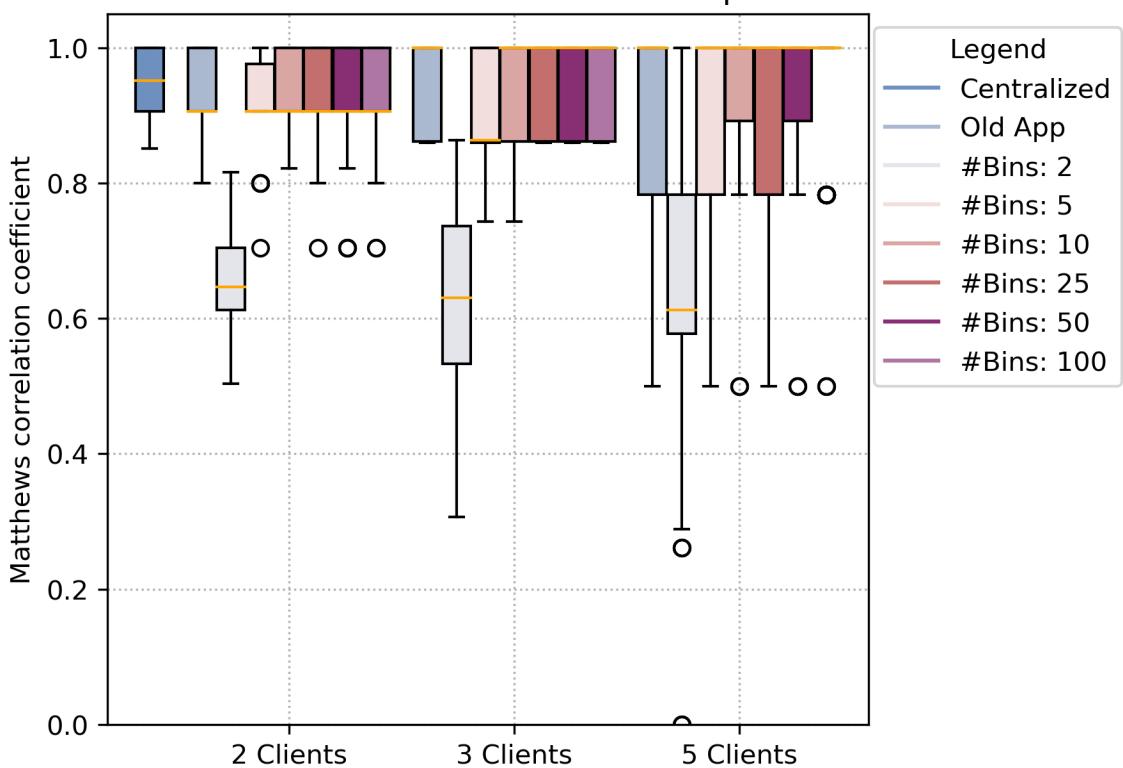
**Old App vs New Fixed Width App:**



Dataset: Iris - #Estimators: 100 - Depth: 10



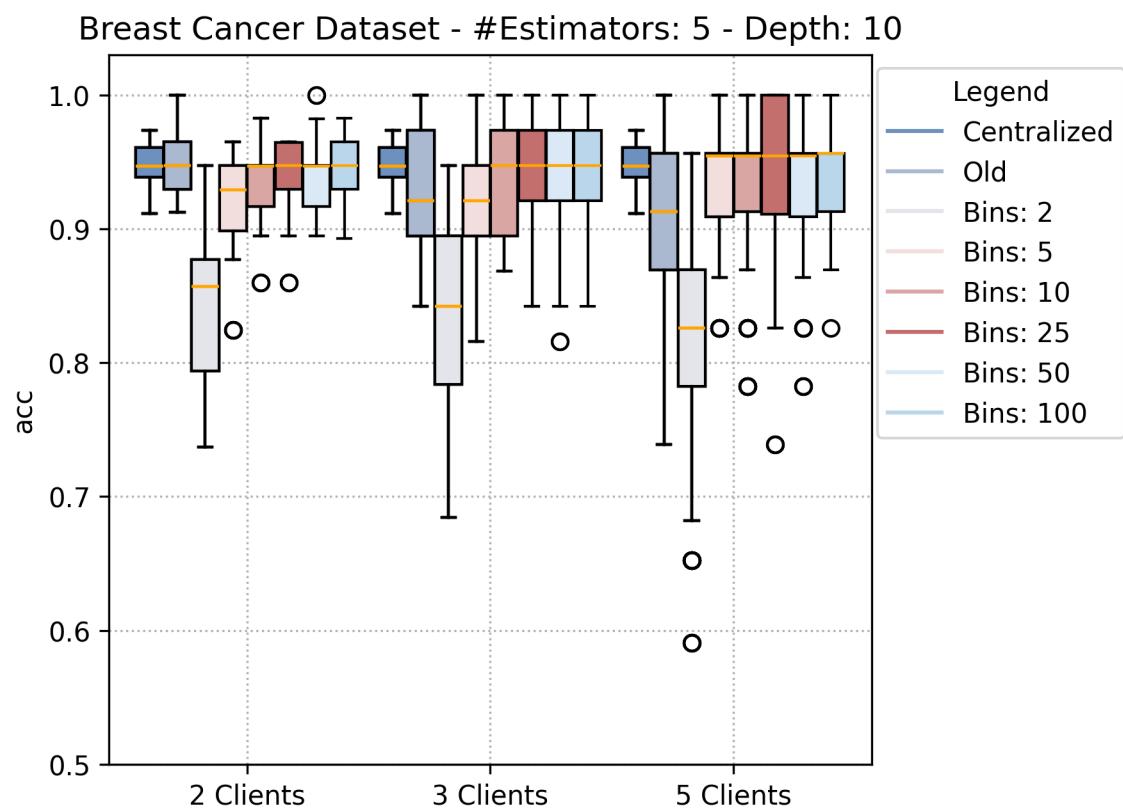
Dataset: Iris - #Estimators: 100 - Depth: 10



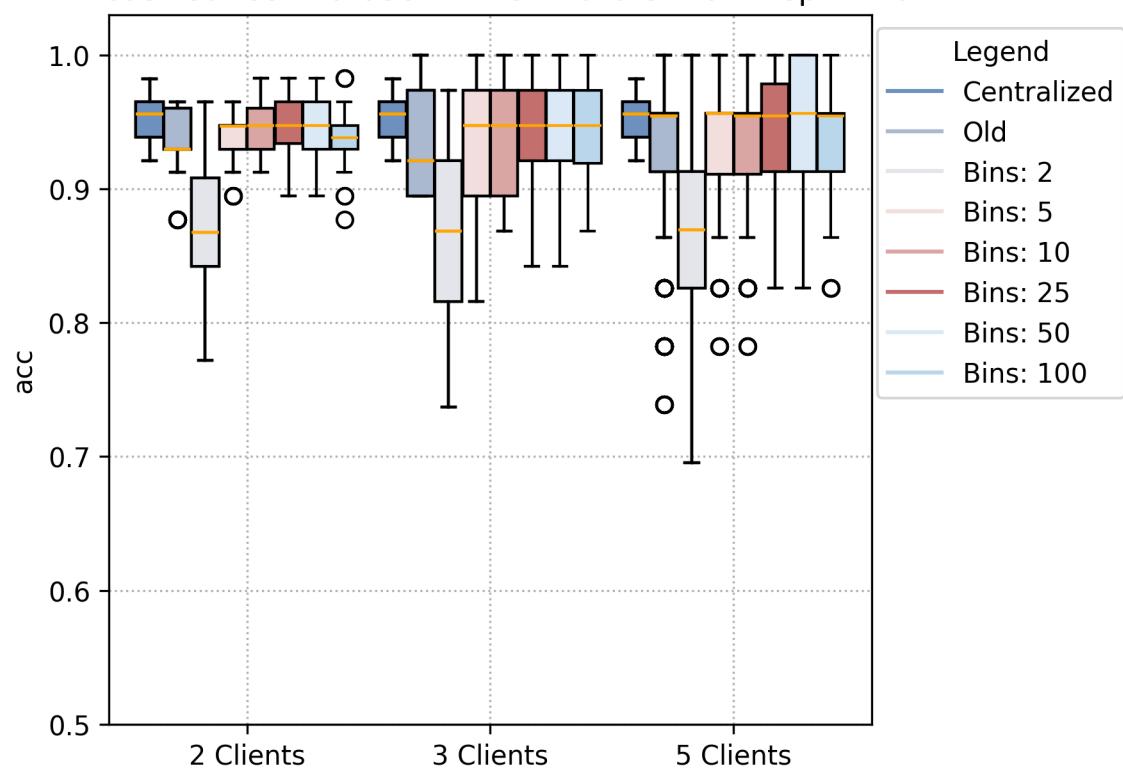
## Breast Cancer Dataset:

```
min_samples_split: 2  
min_samples_leaf: 1  
max_features: sqrt  
max_samples: 0.75
```

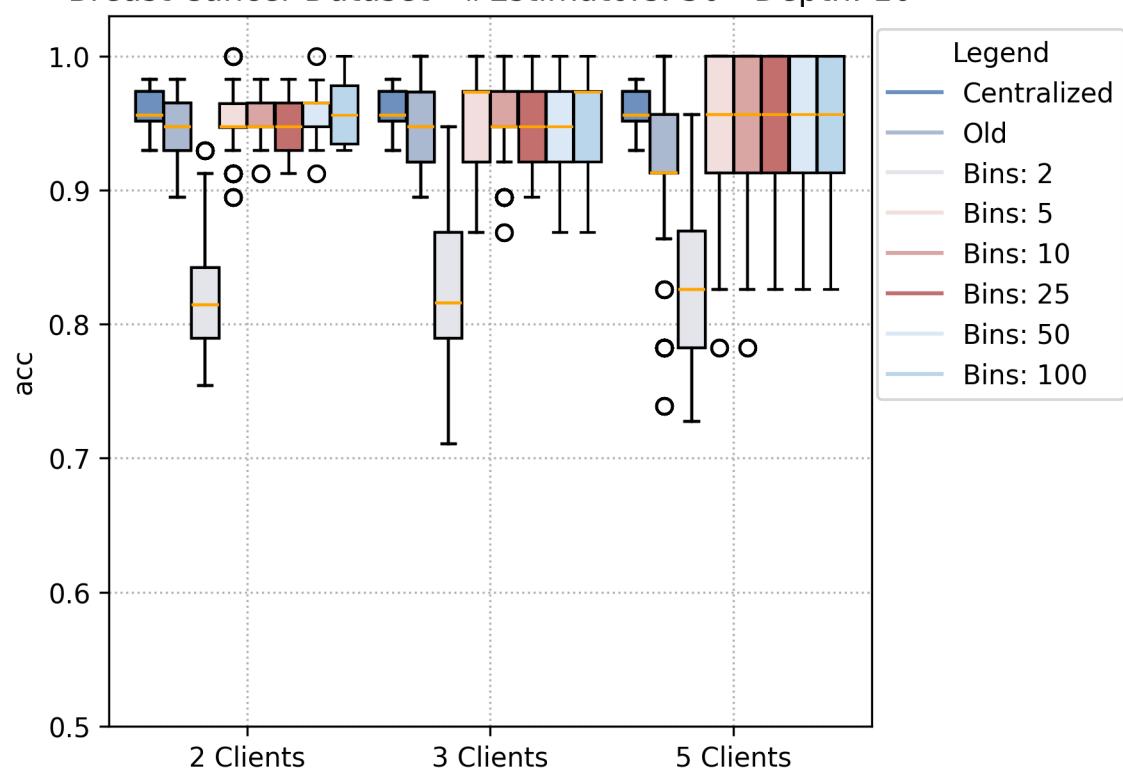
## Accuracy:



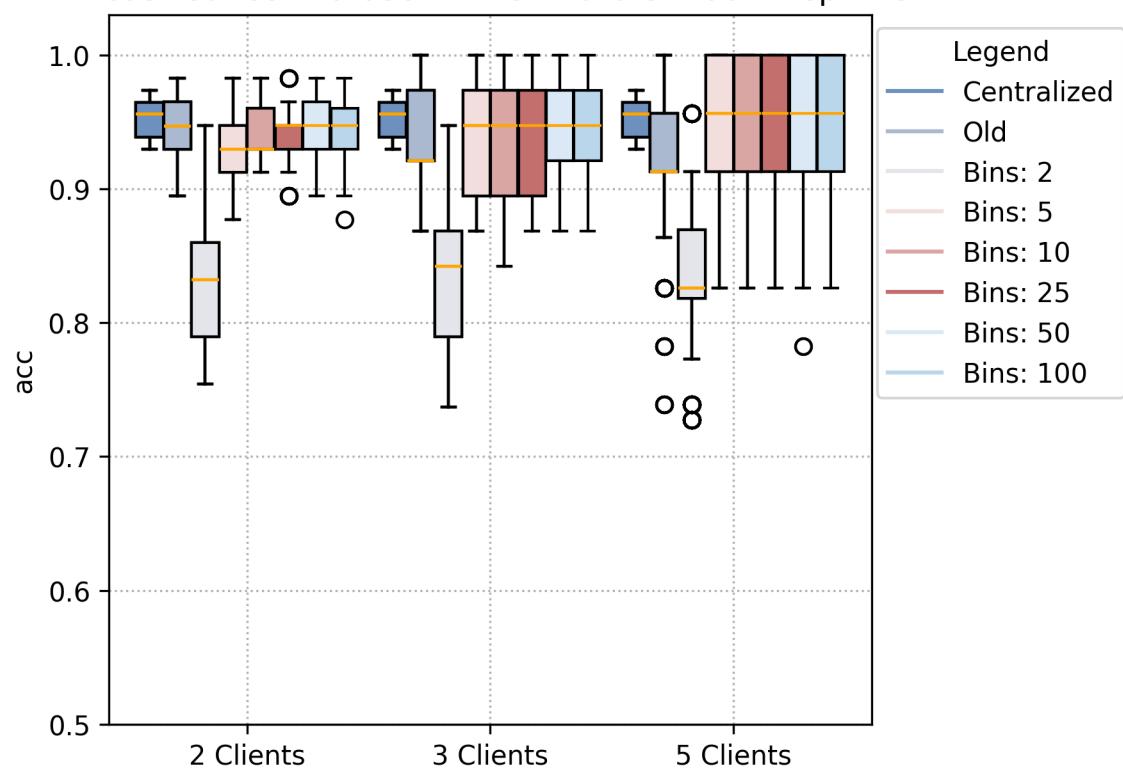
Breast Cancer Dataset - #Estimators: 10 - Depth: 10



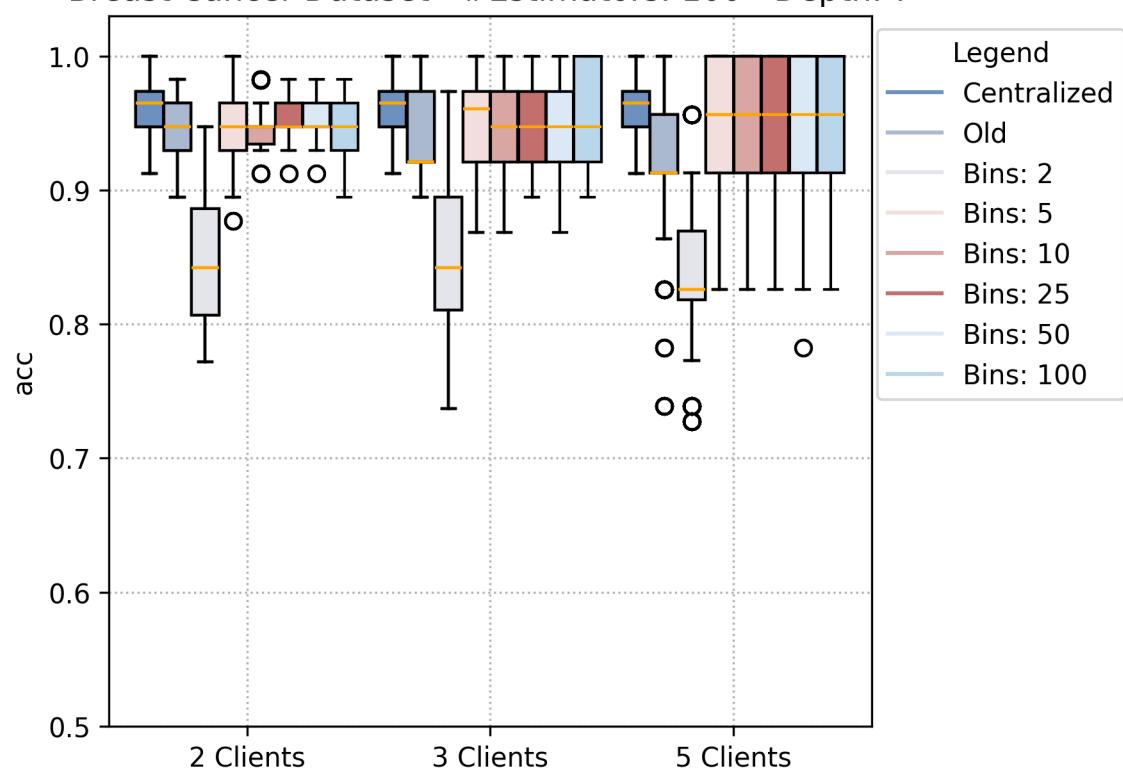
Breast Cancer Dataset - #Estimators: 50 - Depth: 10



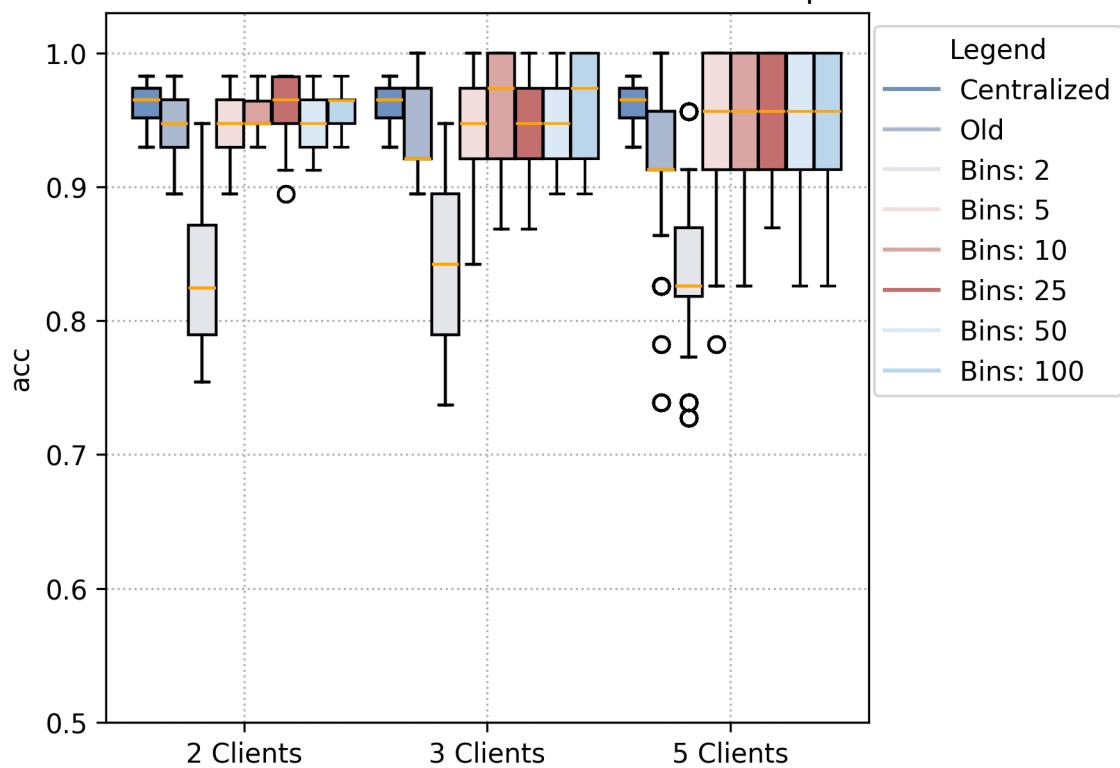
Breast Cancer Dataset - #Estimators: 100 - Depth: 3



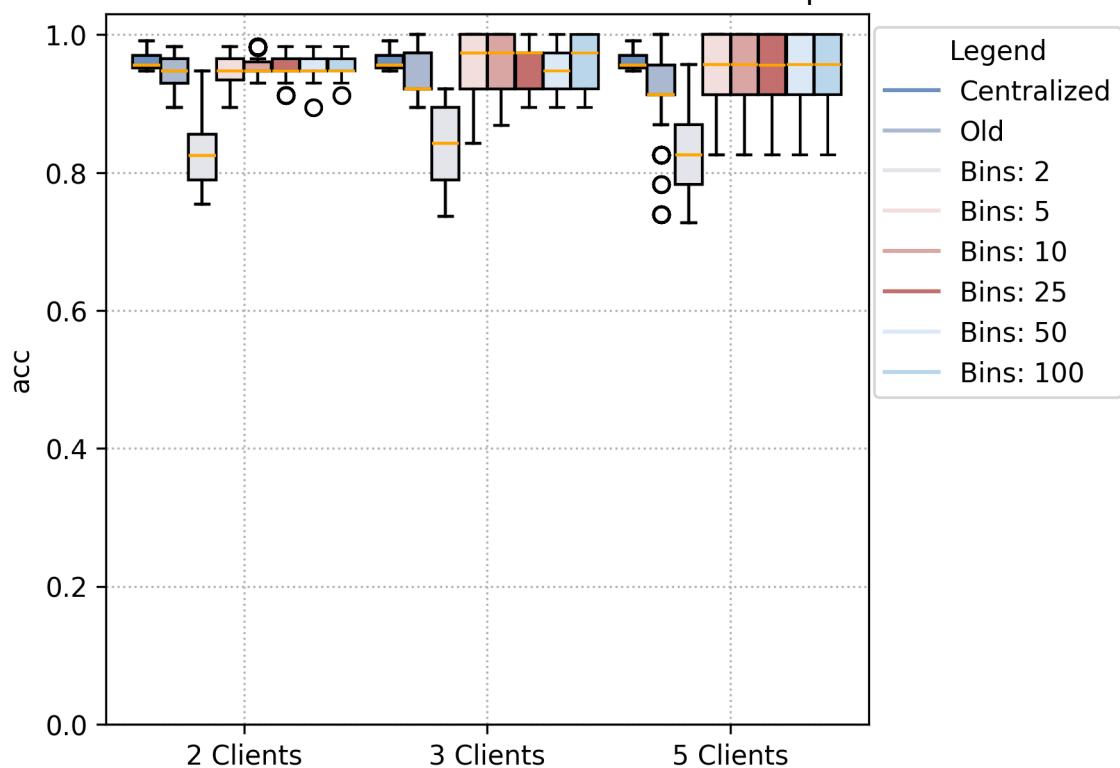
Breast Cancer Dataset - #Estimators: 100 - Depth: 7



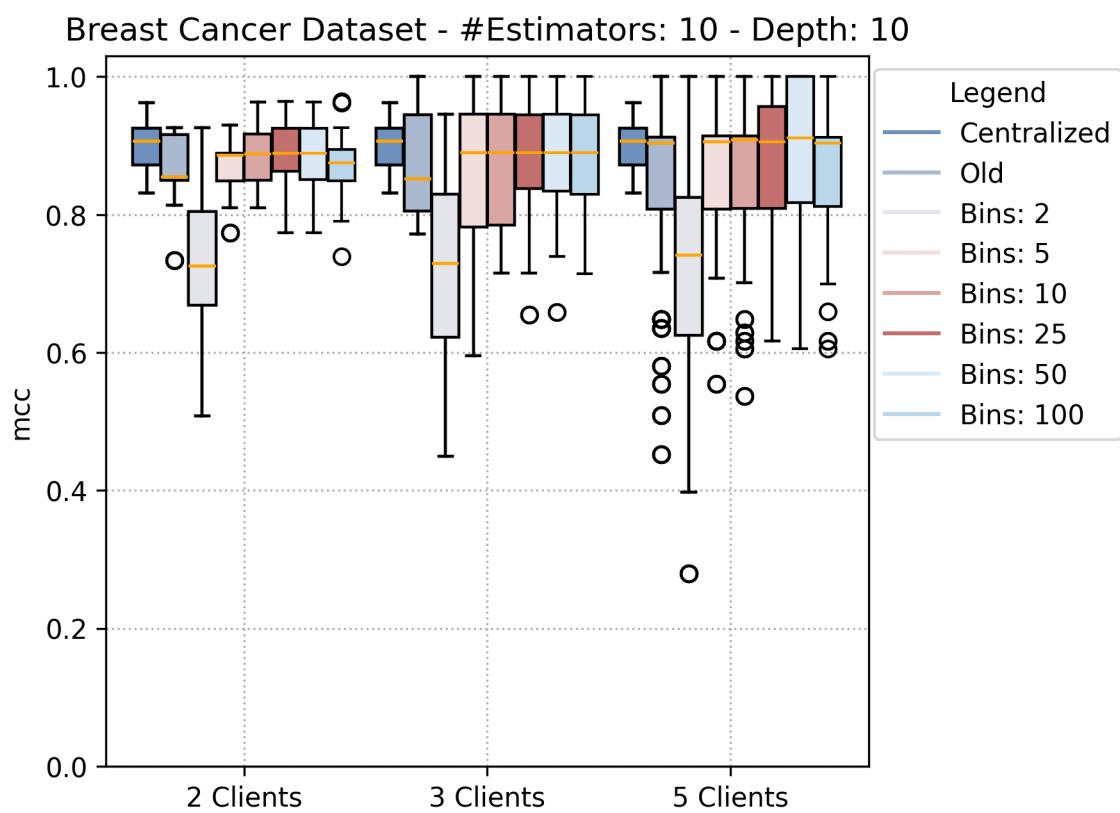
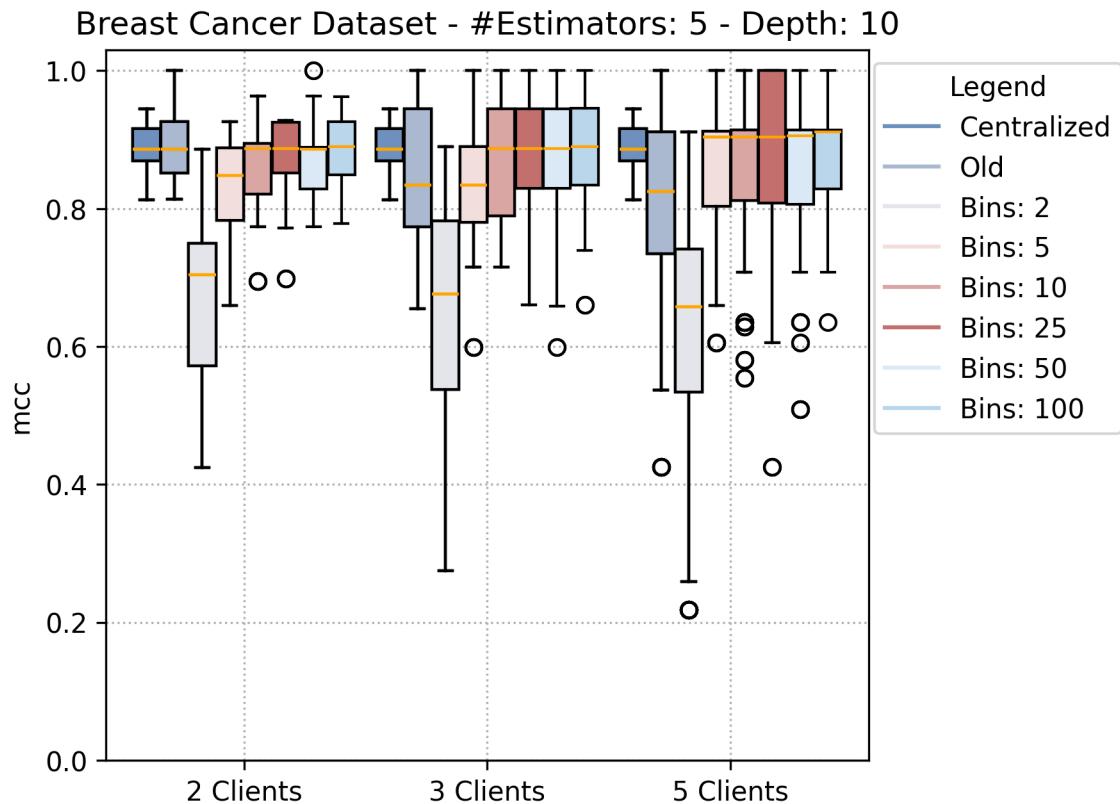
Breast Cancer Dataset - #Estimators: 100 - Depth: 10



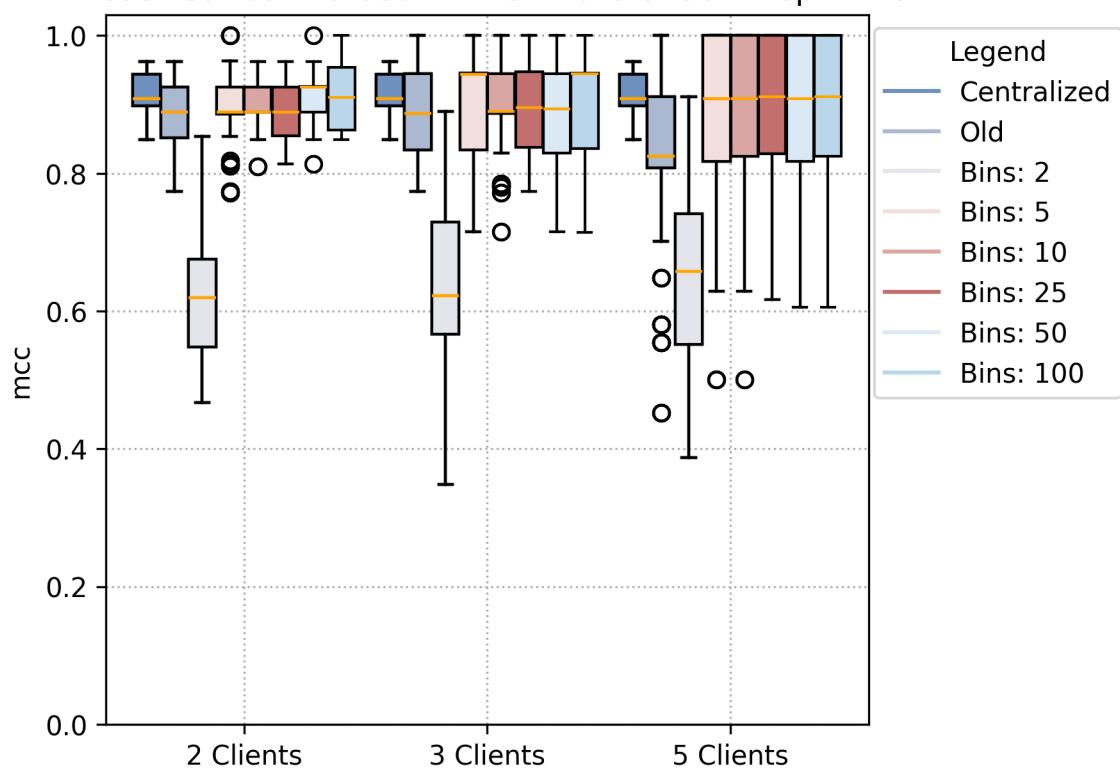
Breast Cancer Dataset - #Estimators: 200 - Depth: 10



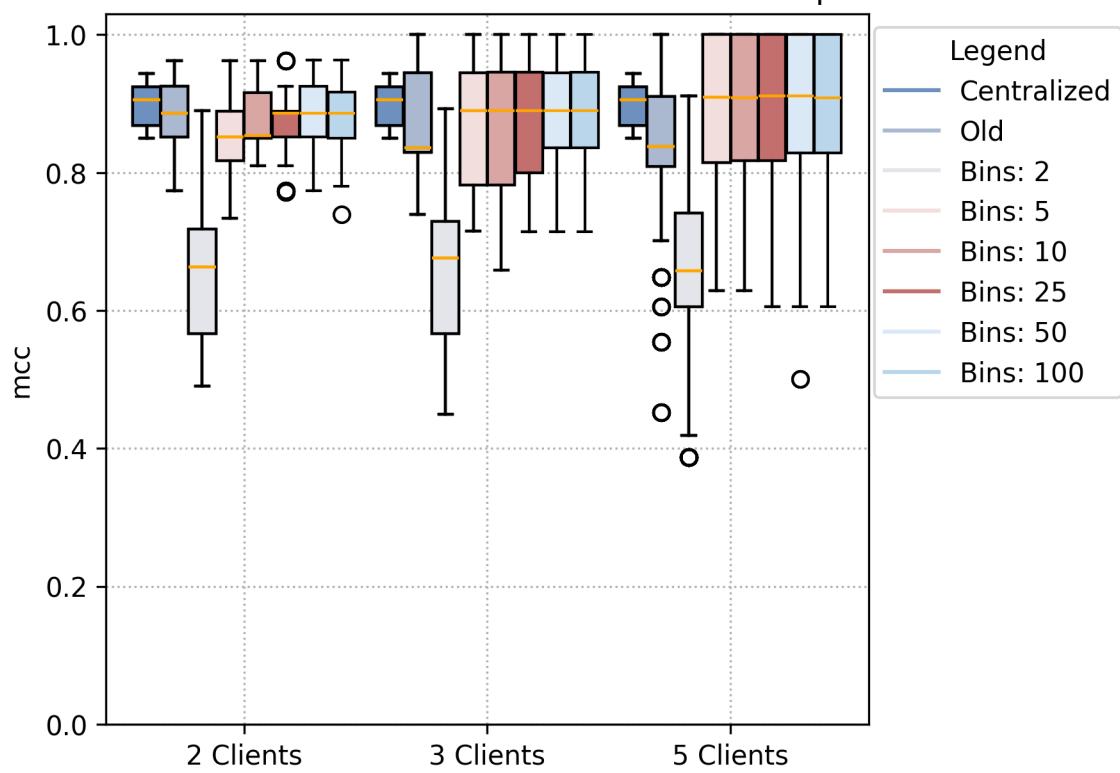
### Matthews correlation coefficient:



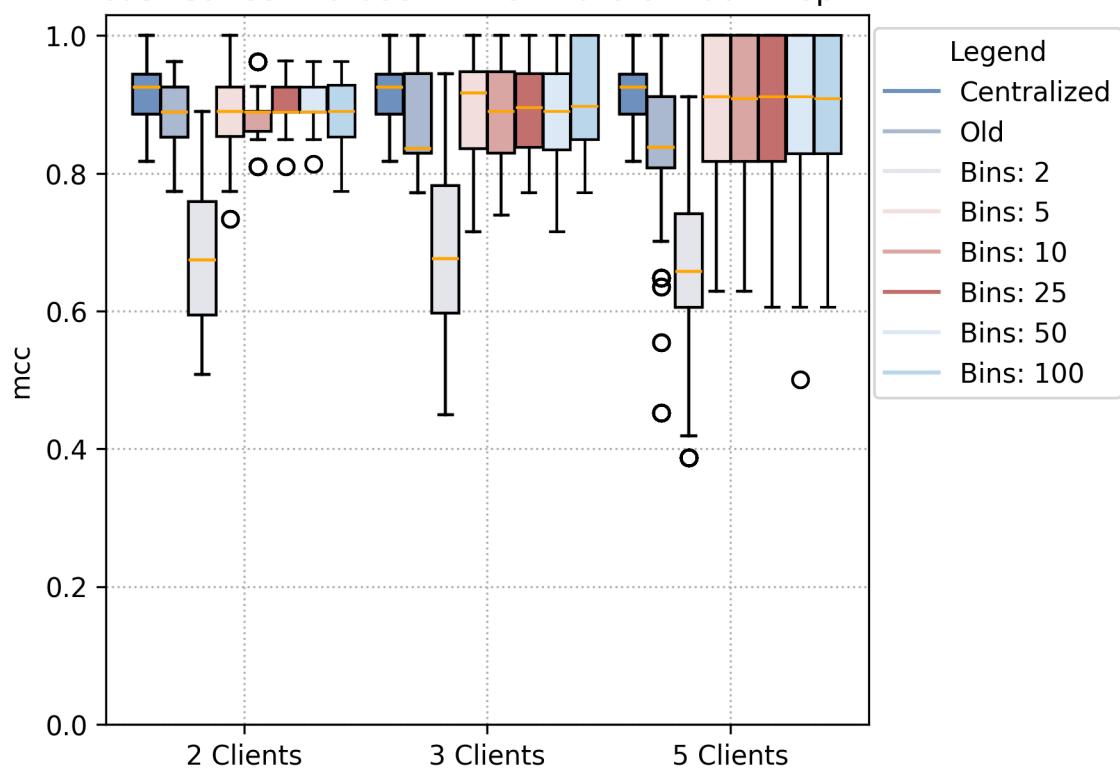
Breast Cancer Dataset - #Estimators: 50 - Depth: 10



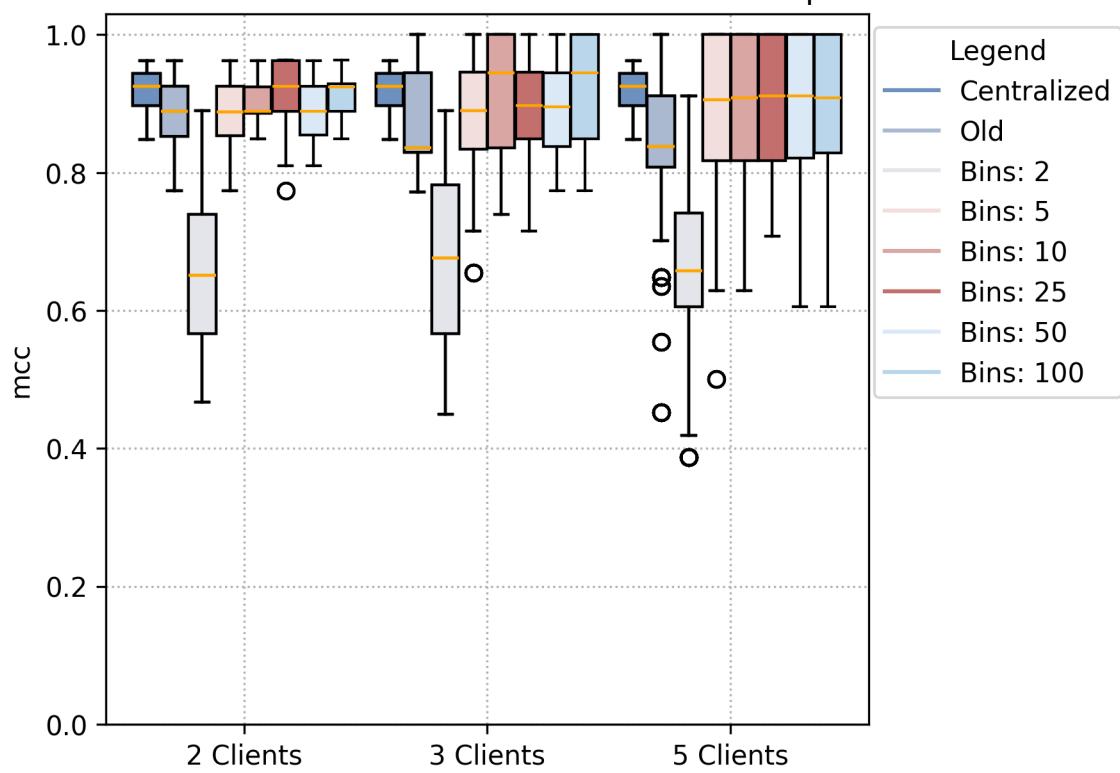
Breast Cancer Dataset - #Estimators: 100 - Depth: 3



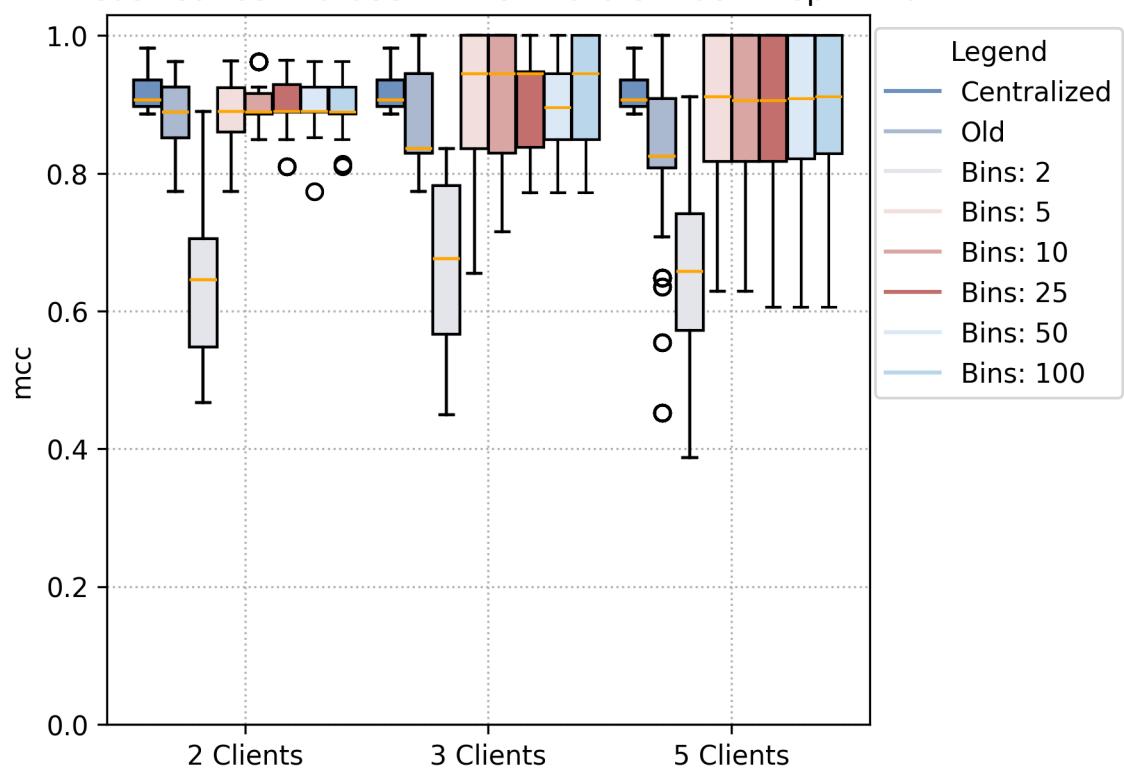
Breast Cancer Dataset - #Estimators: 100 - Depth: 7



Breast Cancer Dataset - #Estimators: 100 - Depth: 10

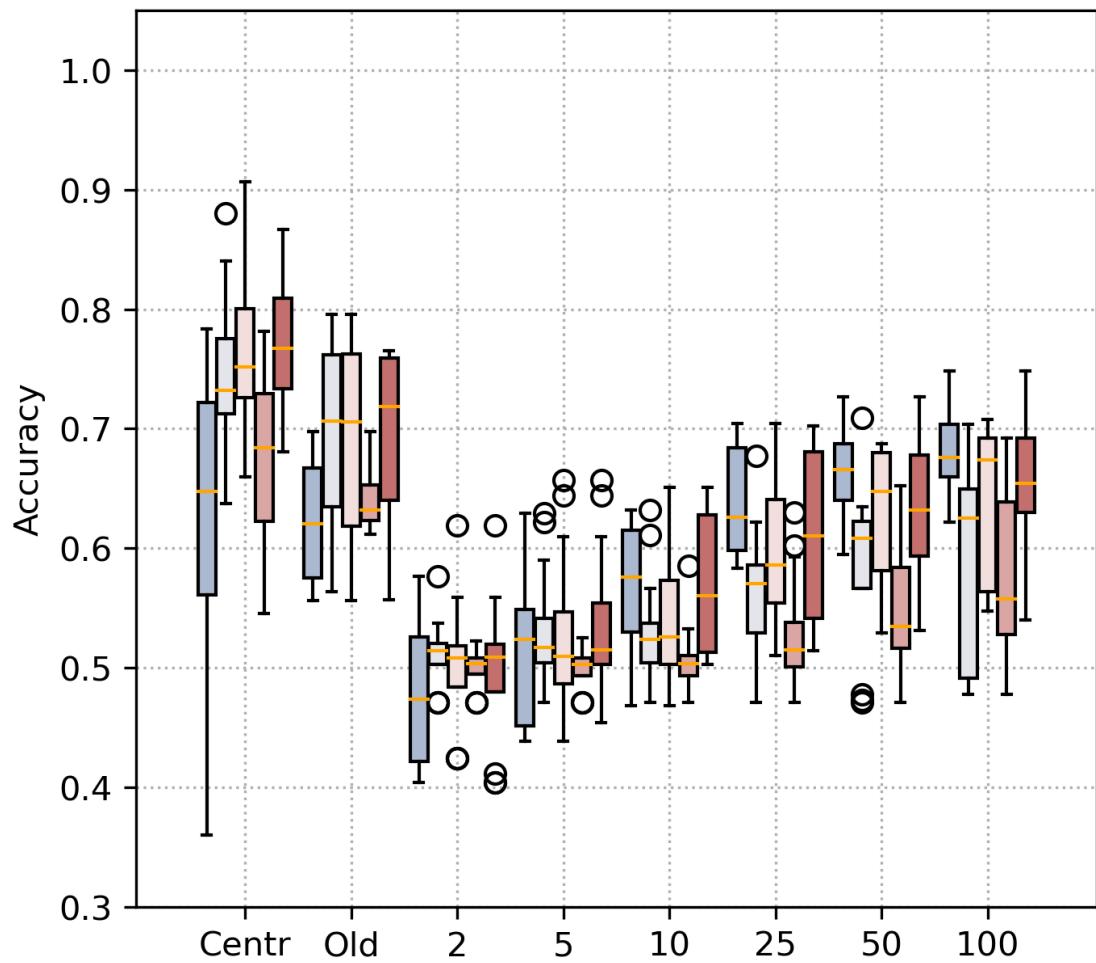


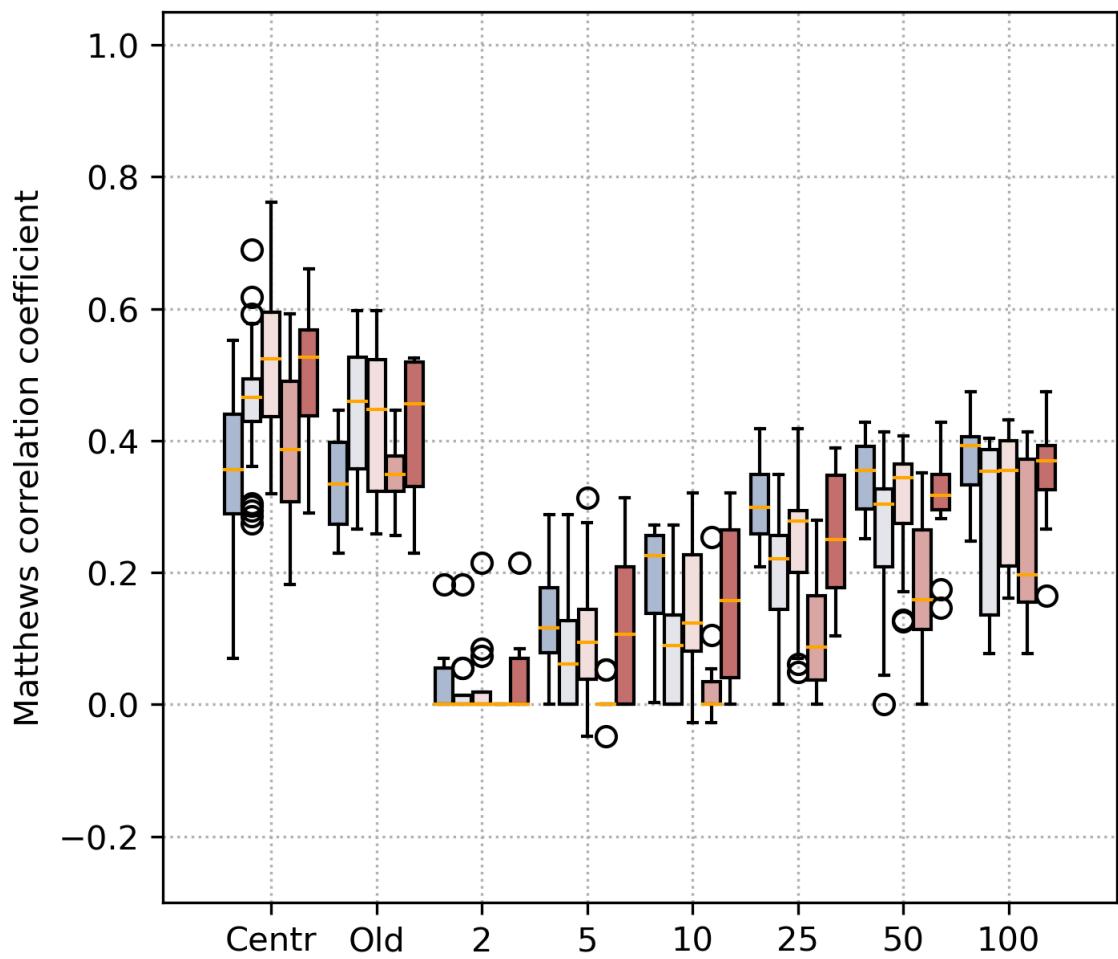
Breast Cancer Dataset - #Estimators: 200 - Depth: 10



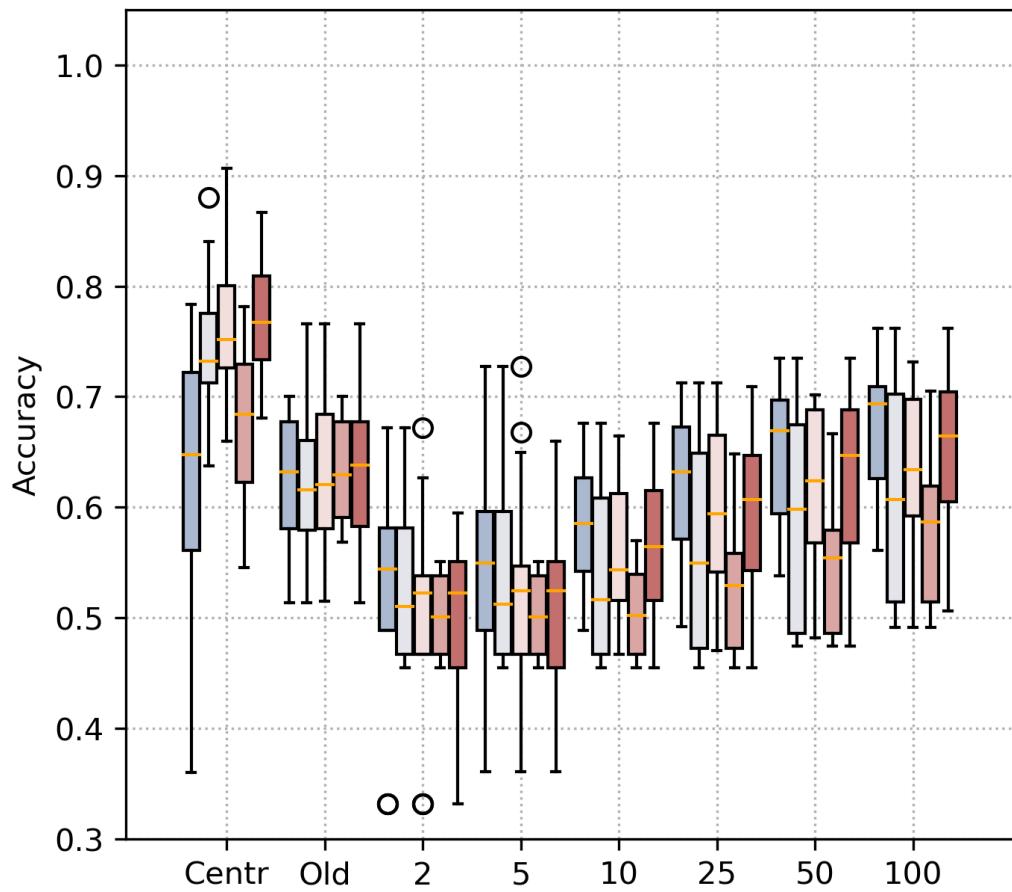
## Microbiome Dataset:

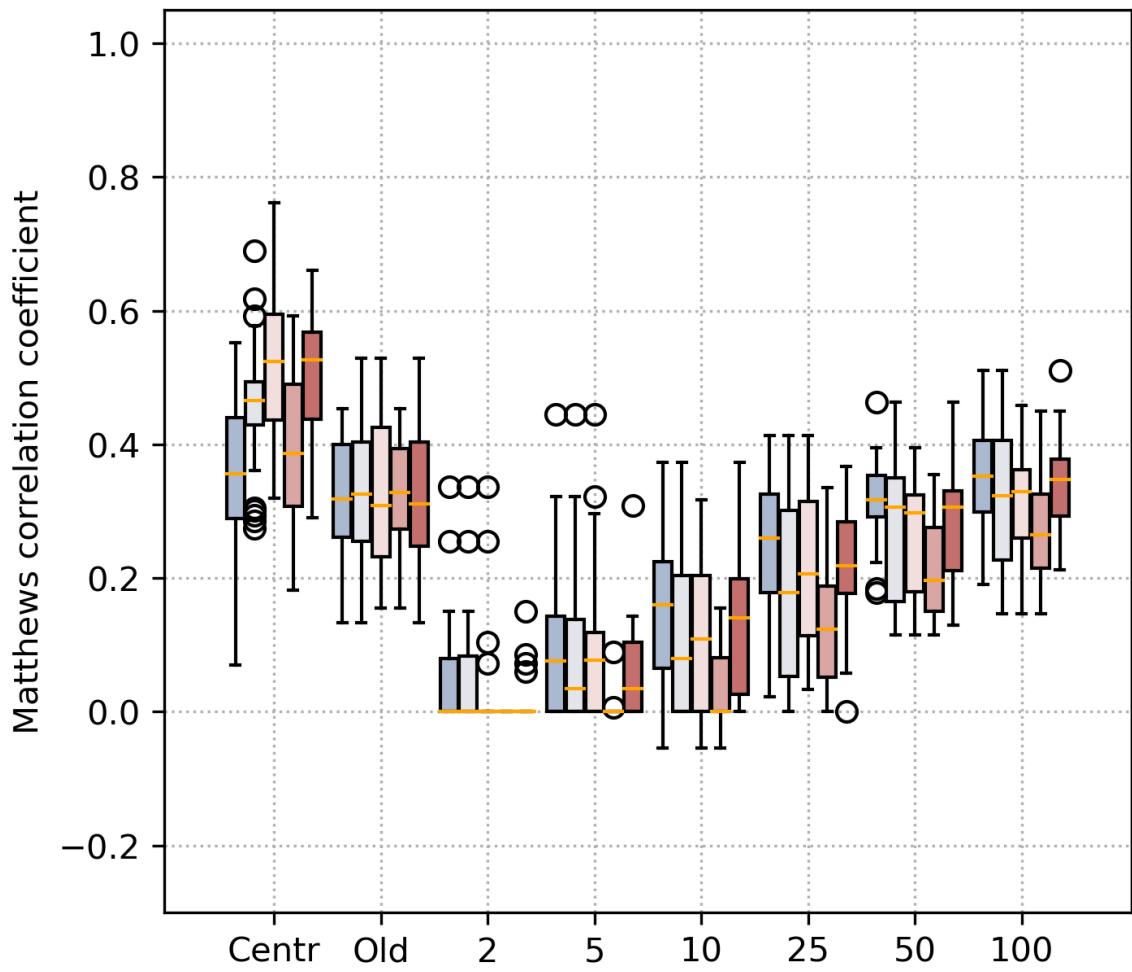
2 Clients – Trees 100 – Depth 10





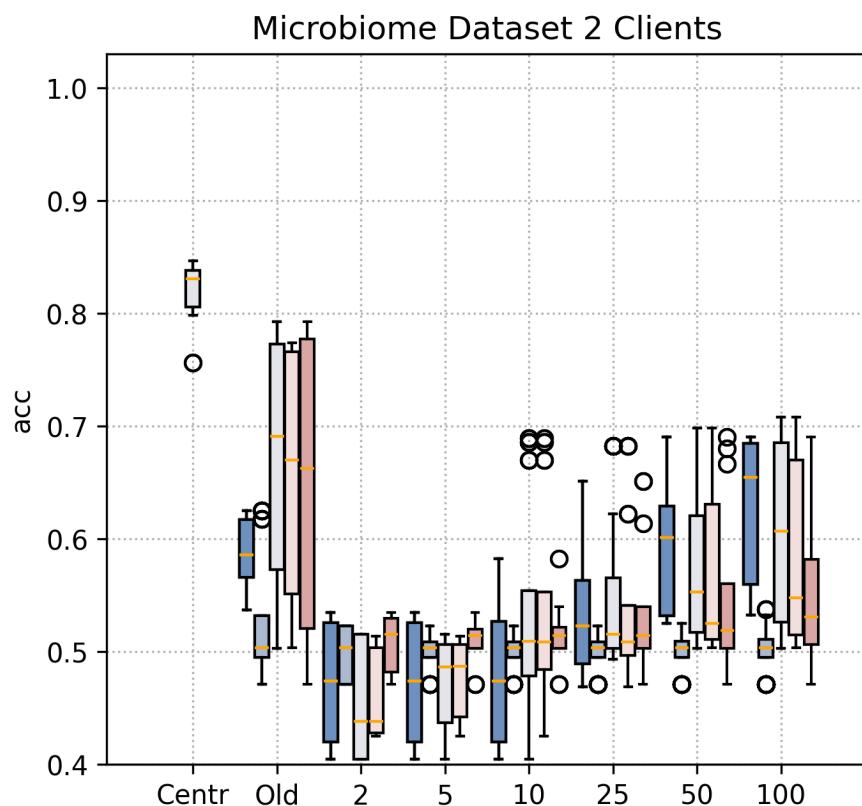
3 Clients – Trees 100 – Depth 10



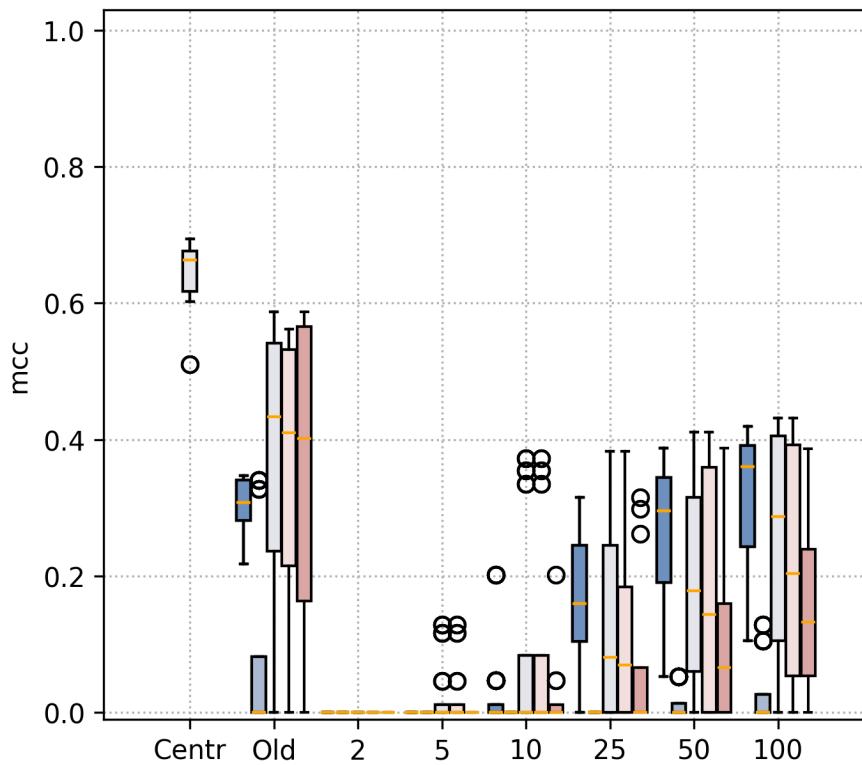


## Microbiome Dataset:

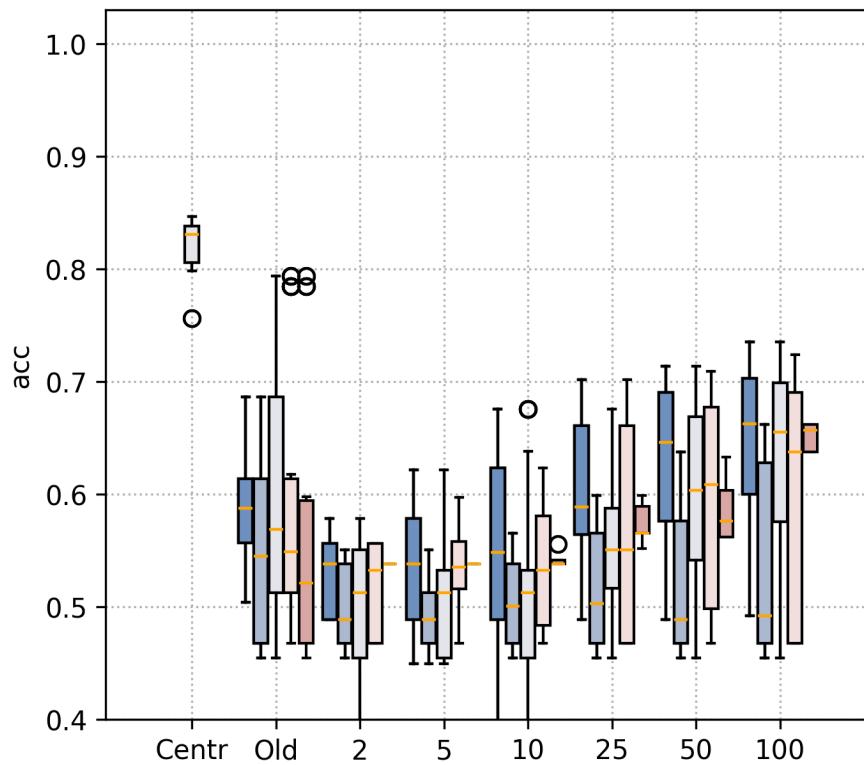
```
min_samples_split: 2  
min_samples_leaf: 5  
max_features: sqrt  
max_samples: 0.3  
max_depth: 10  
max_estimators:1000
```



Microbiome Dataset 2 Clients



Microbiome Dataset 3 Clients



Microbiome Dataset 3 Clients

