

# Tp3 - AIGLE

📅 Date	@27 septembre 2022
▼ Relue	Non commencé
▼ Type	TP
⚙️ État	Non commencé
➡️ 📖 Matières EC	

2)

a)

## Multilayer Perceptron

cross validation : 10

```
Time taken to build model: 43.59 seconds

=== Cross-validation ===
=== Summary ===

Correlation coefficient           0.5217
Mean absolute error              59.4473
Root mean squared error          80.37
Relative absolute error          86.3737 %
Root relative squared error      87.2767 %
Total Number of Instances       42220
Ignored Class Unknown Instances 1580
```

percentage split 66% et preserve order for%split

Correlation coefficient	0.5087	
Mean absolute error	87.7006	
Root mean squared error	112.7966	
Relative absolute error	132.1985	%
Root relative squared error	129.1918	%
Total Number of Instances	14859	
Ignored Class Unknown Instances		33

## RandomTree

cross validation : 10

Correlation coefficient	0.8236	
Mean absolute error	29.2853	
Root mean squared error	54.6016	
Relative absolute error	42.5499	%
Root relative squared error	59.2938	%
Total Number of Instances	42220	
Ignored Class Unknown Instances		1580

percentage split 66% et preserve order for%split

=== Summary ===

Correlation coefficient	0.2652	
Mean absolute error	70.0144	
Root mean squared error	98.6312	
Relative absolute error	105.5386	%
Root relative squared error	112.9675	%
Total Number of Instances	14859	
Ignored Class Unknown Instances		33

**b)**

## jeux de donnée + pm2.5 | pm2.5\_3 | pm2.5\_4 | pm2.5\_5

percentage split 66% et preserve order for%split

```
=== Summary ===  
  
Correlation coefficient           0.8891  
Mean absolute error              25.4132  
Root mean squared error          39.9627  
Relative absolute error          38.3062 %  
Root relative squared error      45.7689 %  
Total Number of Instances       14857  
Ignored Class Unknown Instances 33
```

Random Tree

```
=== Summary ===  
  
Correlation coefficient           0.7335  
Mean absolute error              39.3566  
Root mean squared error          62.8407  
Relative absolute error          59.3235 %  
Root relative squared error      71.971 %  
Total Number of Instances       14857  
Ignored Class Unknown Instances 33
```

c)

**attribut selection**

1 ☒ day

2 ☐ cbwd

3 ☐ lws

4 ☐ lr

5 ☐ pm2.5\_3

6 ☐ pm2.5

## Random Tree

```
=== Summary ===

Correlation coefficient          0.7584
Mean absolute error             37.5635
Root mean squared error         60.1211
Relative absolute error         56.6206 %
Root relative squared error     68.8563 %
Total Number of Instances      14857
Ignored Class Unknown Instances 33
```

## Multilayer perceptron

```
=== Summary ===

Correlation coefficient          0.7584
Mean absolute error             37.5635
Root mean squared error         60.1211
Relative absolute error         56.6206 %
Root relative squared error     68.8563 %
Total Number of Instances      14857
Ignored Class Unknown Instances 33
```

**d)**

- 1 ☒ pm2.5
- 2 ☐ pm2.5\_3
- 3 ☐ pm2.5\_4
- 4 ☐ pm2.5\_5

## Multilayer perceptron

```

=== Summary ===

Correlation coefficient           0.8812
Mean absolute error              25.9237
Root mean squared error         41.4716
Relative absolute error         39.0756 %
Root relative squared error     47.4972 %
Total Number of Instances      14857
Ignored Class Unknown Instances          33

```

## Random Tree

```

=== Summary ===

Correlation coefficient           0.7775
Mean absolute error              36.5356
Root mean squared error         59.0848
Relative absolute error         55.0714 %
Root relative squared error     67.6694 %
Total Number of Instances      14857
Ignored Class Unknown Instances          33

```

## Attribut selection

1 ☐ pm2.5\_3

2 ☐ pm2.5

### Multilayer perceptron

```
=== Summary ===
```

Correlation coefficient	0.8792
Mean absolute error	26.2866
Root mean squared error	41.8917
Relative absolute error	39.6227 %
Root relative squared error	47.9782 %
Total Number of Instances	14857
Ignored Class Unknown Instances	33

### RandomTree

```
=== Summary ===
```

Correlation coefficient	0.8734
Mean absolute error	26.0624
Root mean squared error	42.4244
Relative absolute error	39.2848 %
Root relative squared error	48.5884 %
Total Number of Instances	14857
Ignored Class Unknown Instances	33