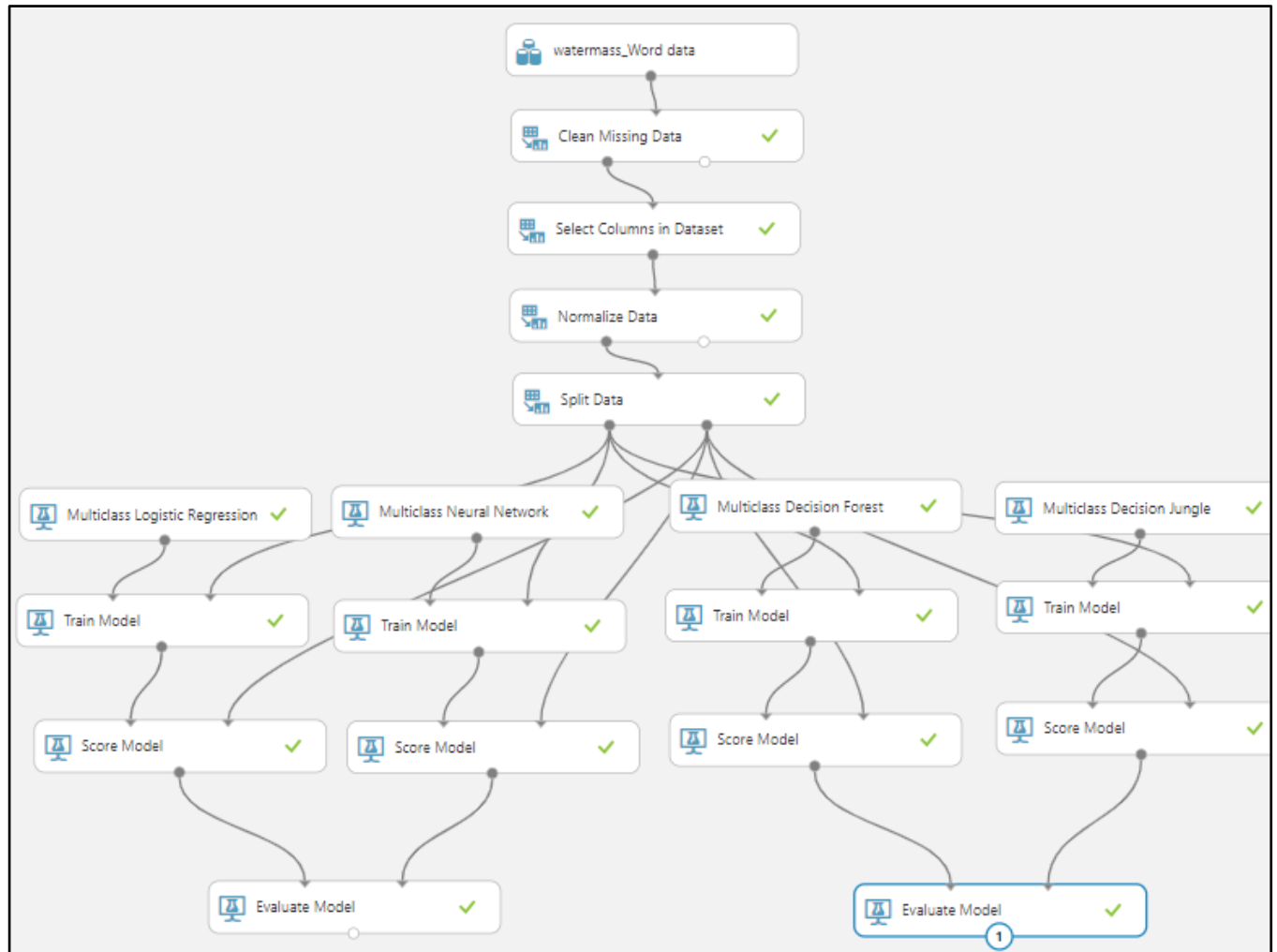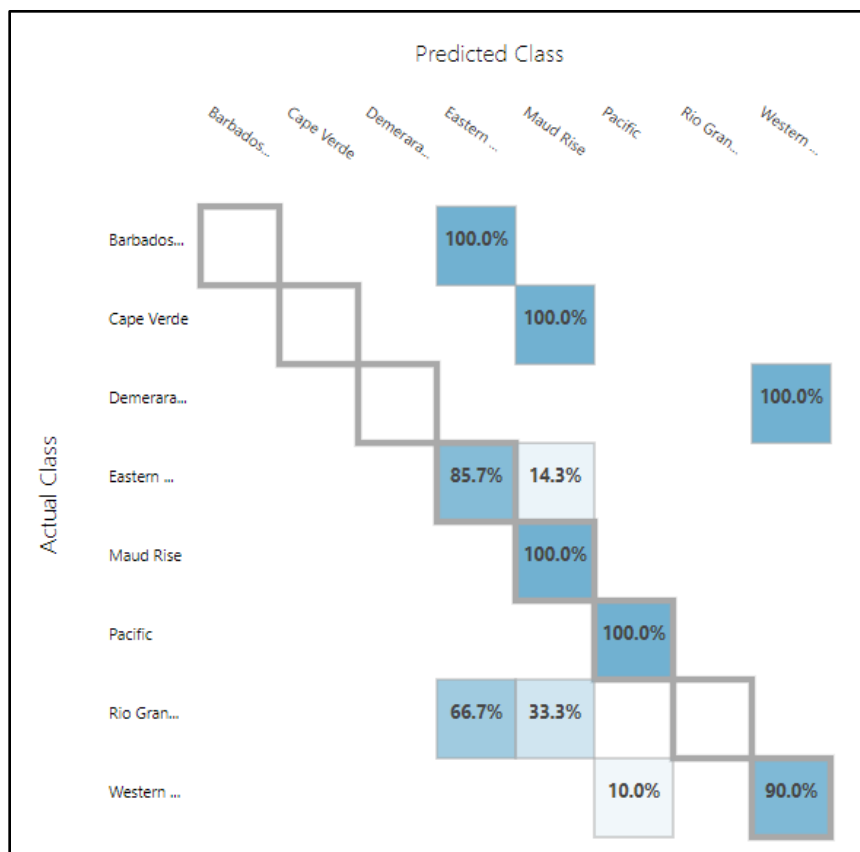# Water Mass Classification using Chemical isotopes proxies by using Azure machine learning

1. Logistic regression algorithm:

◢ Metrics
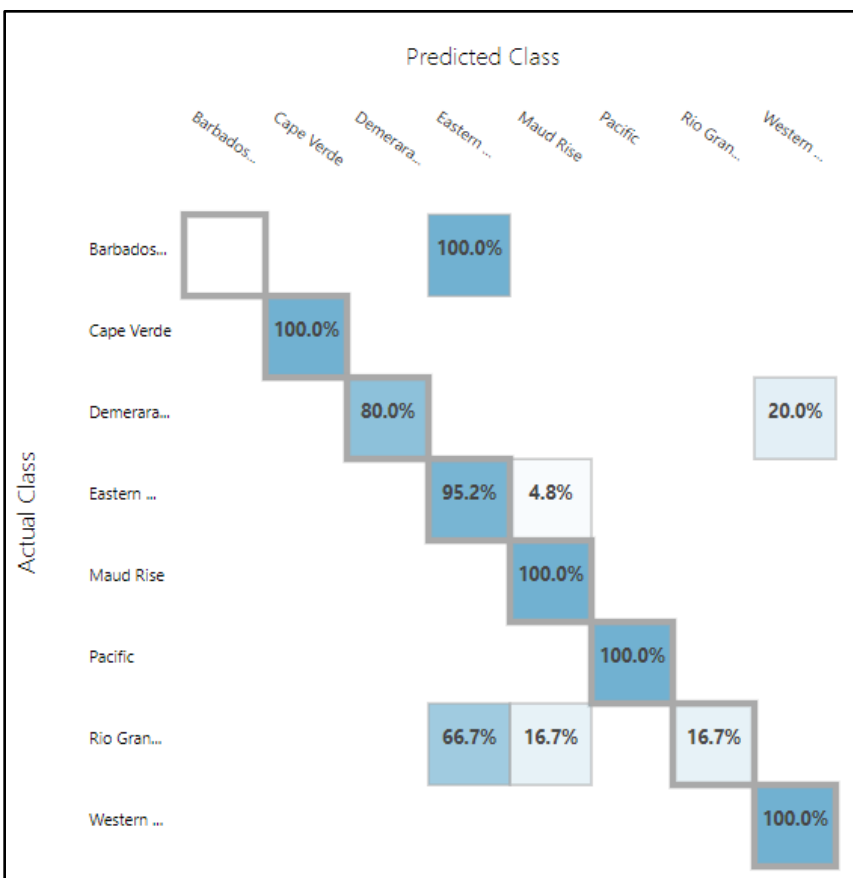
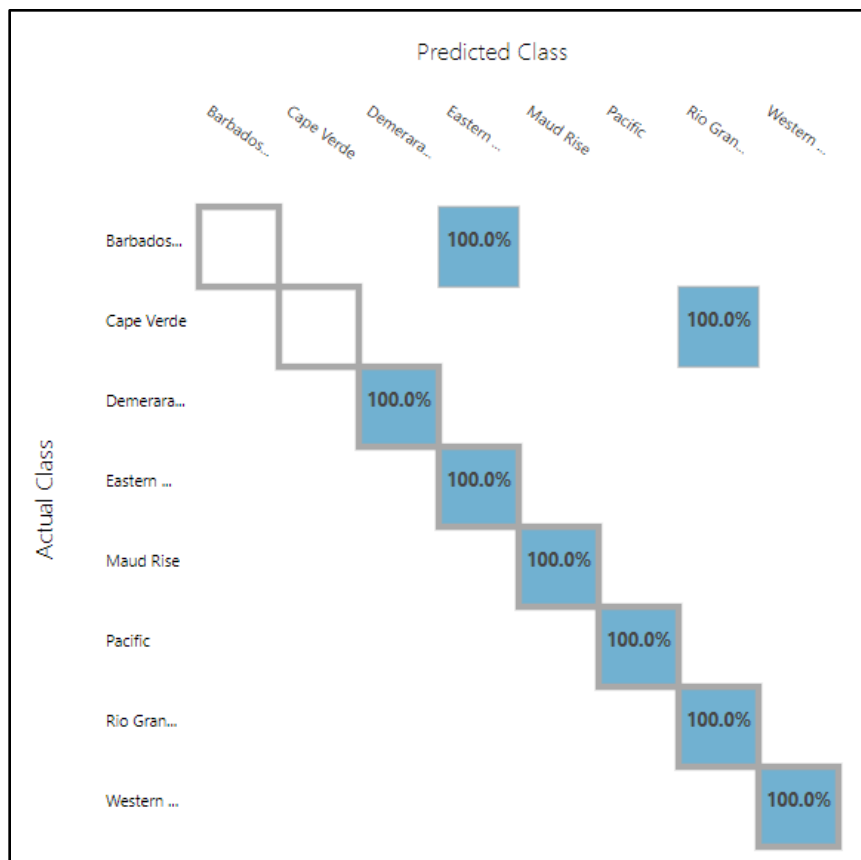|	
Overall accuracy	0.731343
Average accuracy	0.932836
Micro-averaged precision	0.731343
Macro-averaged precision	NaN
Micro-averaged recall	0.731343
Macro-averaged recall	0.469643

2. Neural Network algorithm:

Metrics

Overall accuracy	0.880597
Average accuracy	0.970149
Micro-averaged precision	0.880597
Macro-averaged precision	NaN
Micro-averaged recall	0.880597
Macro-averaged recall	0.739881

Predicted Class

Actual Class	Barbados...	Cape Verde	Demerara...	Eastern ...	Maud Rise	Pacific	Rio Gran...	Western ...
Barbados...				100.0%				
Cape Verde		100.0%						
Demerara...			80.0%					20.0%
Eastern ...				95.2%	4.8%			
Maud Rise					100.0%			
Pacific						100.0%		
Rio Gran...				66.7%	16.7%		16.7%	
Western ...								100.0%

3. Random Forest algorithm:

Metrics

Overall accuracy	0.955224
Average accuracy	0.988806
Micro-averaged precision	0.955224
Macro-averaged precision	NaN
Micro-averaged recall	0.955224
Macro-averaged recall	0.75

Predicted Class

Actual Class	Barbados...	Cape Verde	Demerara...	Eastern ...	Maud Rise	Pacific	Rio Gran...	Western ...
Barbados...				100.0%				
Cape Verde							100.0%	
Demerara...			100.0%					
Eastern ...				100.0%				
Maud Rise					100.0%			
Pacific						100.0%		
Rio Gran...							100.0%	
Western ...								100.0%

4. Decision Jungle algorithm:

◢ Metrics

Overall accuracy	0.910448
Average accuracy	0.977612
Micro-averaged precision	0.910448
Macro-averaged precision	NaN
Micro-averaged recall	0.910448
Macro-averaged recall	0.683333