

```
[Mon Mar 16 15:07] liuyih's Mac ~/Desktop/radiation-counting-ml-master $ ls
2020-01-31_co_ba.dat      co.dat
2020-01-31_cs_ba.dat      cs.dat
2020-01-31_cs_co.dat      original
Makefile                   ortec_file_utils.py
Pipfile                    parse_binary_list_mode_test.py
README.md                  parse_list_mode_test.py
__pycache__                 serializer.py
ba.dat                     serializer_test.py
ba_co_cs.dat

[Mon Mar 16 15:07] liuyih's Mac ~/Desktop/radiation-counting-ml-master $ python3 serializer_test.py
Using 10 snapshots from each spectrum
Mean accuracy: 1.0
10-fold cross-validation: [1. 1. 1. 1. 1. 1. 1. 1. 1.]

Performing real-time classification of Cs-137
Done in 22295 ADC events
Classified in 102.15374500200001 seconds
Prediction: ('Cs-137',)
Probabilities:
    Ba-133: [9.99900034e-01 9.99656078e-05]
    Co-60: [9.99991814e-01 8.18615096e-06]
    Cs-137: [0. 1.]

Performing real-time classification of Ba-133
Done in 16576 ADC events
Classified in 75.99797030900001 seconds
Prediction: ('Ba-133',)
Probabilities:
    Ba-133: [9.13782370e-07 9.99999086e-01]
    Co-60: [9.99951227e-01 4.87731996e-05]
    Cs-137: [9.99900074e-01 9.99262575e-05]

Performing real-time classification of Co-60
Done in 11924 ADC events
Classified in 54.80855887699996 seconds
Prediction: ('Co-60',)
Probabilities:
    Ba-133: [9.99900049e-01 9.99508813e-05]
    Co-60: [0. 1.]
    Cs-137: [9.99994659e-01 5.34127589e-06]
```

```
radiation-counting-ml-master — bash — 100x41
Performing real-time classification of Ba-133, Co-60
Done in 21594 ADC events
Classified in 98.77898288800003 seconds
Prediction: ('Ba-133', 'Co-60')
Probabilities:
    Ba-133: [9.98955018e-05 9.99900104e-01]
    Co-60: [1.55431223e-14 1.00000000e+00]
    Cs-137: [9.9999721e-01 2.78569593e-07]

Performing real-time classification of Ba-133, Cs-137
Done in 38286 ADC events
Classified in 176.06529574699994 seconds
Prediction: ('Ba-133', 'Cs-137')
Probabilities:
    Ba-133: [9.99775350e-05 9.99900022e-01]
    Co-60: [9.9999983e-01 1.67637206e-08]
    Cs-137: [0. 1.]

Performing real-time classification of Co-60, Cs-137
Done in 18347 ADC events
Classified in 85.85696827200002 seconds
Prediction: ('Co-60', 'Cs-137')
Probabilities:
    Ba-133: [9.99900043e-01 9.99566828e-05]
    Co-60: [6.68030374e-06 9.99993320e-01]
    Cs-137: [1.11866072e-11 1.00000000e+00]

Performing real-time classification of Ba-133, Co-60, Cs-137
Done in 64973 ADC events
Classified in 290.4595735099999 seconds
Prediction: ('Ba-133', 'Co-60', 'Cs-137')
Probabilities:
    Ba-133: [9.99375743e-05 9.99900062e-01]
    Co-60: [7.46714957e-08 9.99999925e-01]
    Cs-137: [0. 1.]
```