DNN: Convolutional network

Train samples: 100000 (25000 each) 5 types: ACEP, DSCT, ECL, RRLYR, T2CEP

Validation samples: 25000 (5000 each)

Test samples: 10000 (2500 each) 4 types: ACEP, ECL, RRLYR, T2CEP

OGLE3-based DNN, 1st test result

based on non-color coded (period) lightcurves

Test with generated dummy variable lightcurves

| | ACEP | DSCT | ECL | RRLYR | T2CEP |
|-------|-------|------|-------|-------|-------|
| ACEP | 73.24 | 0.24 | 0.93 | 12.08 | 13.50 |
| DSCT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ECL | 0.00 | 1.83 | 97.80 | 0.2 | 0.16 |
| RRLYR | 4.23 | 0.16 | 0.4 | 83.89 | 11.31 |
| T2CEP | 3.73 | 0.77 | 1.67 | 5.42 | 88.38 |

Test without generated dummy variable lightcurves

| | ACEP | DSCT | ECL | RRLYR | T2CEP |
|-------|-------|------|-------|-------|-------|
| ACEP | 76.60 | 0.00 | 0.00 | 12.06 | 11.35 |
| DSCT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ECL | 0.00 | 1.83 | 97.80 | 0.2 | 0.16 |
| RRLYR | 4.23 | 0.16 | 0.4 | 83.89 | 11.31 |
| T2CEP | 3.89 | 0.71 | 1.77 | 4.59 | 89.05 |

OGLE3-based DNN, 1st test result

based on color coded (period) lightcurves

Test with generated dummy variable lightcurves

| _ | ACEP | DSCT | ECL | RRLYR | T2CEP |
|-------|------|------|-------|-------|-------|
| ACEP | 0.00 | 0.00 | 0.70 | 0.00 | 99.30 |
| DSCT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ECL | 0.00 | 0.00 | 99.64 | 0.00 | 0.36 |
| RRLYR | 0.00 | 0.00 | 1.01 | 0.00 | 98.99 |
| T2CEP | 0.00 | 0.00 | 0.41 | 0.00 | 99.59 |

Test without generated dummy variable lightcurves

| _ | ACEP | DSCT | ECL | RRLYR | T2CEP |
|-------|------|------|-------|-------|-------|
| ACEP | 0.00 | 0.00 | 0.71 | 0.00 | 99.29 |
| DSCT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ECL | 0.00 | 0.00 | 99.64 | 0.00 | 0.36 |
| RRLYR | 0.00 | 0.00 | 1.01 | 0.00 | 98.99 |
| T2CEP | 0.00 | 0.00 | 0.35 | 0.00 | 99.65 |