CNN-EIA 2022-06-28

{Dataflow} Analyzer Report

Introduction:

This report generated by CNN-EIA. The goal of this report is analysing the dataflow of the given

Machine Learning Model. The analysis was done on these inputs:

Memory Architecture:

```
{
mem_levels:
capacity:
                           [16.0, 16384.0, 536870912.0]
                           [0.05, 3.84, 200]
access_cost:
static_cost:
                           [0, 0, 0]
parallel_count:
                           [256, 1, 1]
mac_capacity:
                           0
parallel mode:
                           [1, 0, 0]
parallel cost:
                           [2]
capacity_scale:
                           [2, 2]
access cost scale:
                           [2, 1.25]
explore_points:
                           [5, 4]
precision:
                           16
array dim:
                           None
utilization_threshold:
                           0.0
replication:
                           True
invalid_underutilized:
                           True
memory_partitions:
                           [[0, 0, 0], [0, 0, 0], [0, 0, 0], [None, None, None]]
}
```

Layer Architecture:

```
fmap_width:
                          1
fmap_height:
                          1
input_fmap_channel:
                         500
output_fmap_channel:
                         250
window width:
                         1
window height:
                          1
                         16
batch size:
stride width:
                          1
stride height:
layer info:
                         [1, 1, 500, 250, 1, 1, 16, 1, 1]
layer_name:
                         mlp_fc3_batch16
}
```

CNN-EIA 2022-06-28

Glossary:

- Cache Levels : (L0, L1, L2)
The smallest index the nearest to CPU.

- Loop Names : (FX , FY , OX , OY , OC , IC , ON)