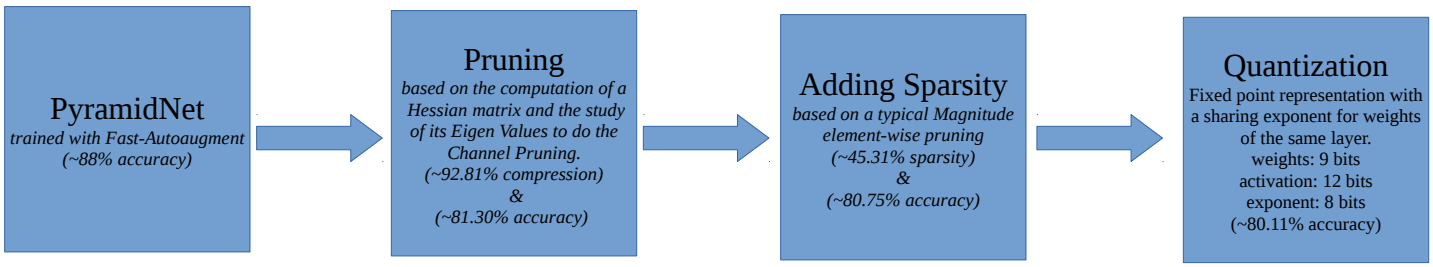
Micronet Challenge Report:

first submission

Here is a schema describing our first submission:



This first submission gives us a final micronet score of : **0.0467.** For a corresponding accuracy of **80.13%.**

To compute the micronet score we followed the following steps.

Storage:

$$Storage = \frac{TotalNonZeroParameters * ParamBits}{32} + \frac{TotalParameters}{32}$$

Math Ops:

$$MathOps = \frac{TotalFlopMults * MultBits}{32} + \frac{TotalFlopAdds * AddBits}{32} + \frac{TotalFlopExponent * ExponentBits}{32}$$

With:

- $ParamBits = 9$
- $MultBits = 12$
- $AddBits = 32$
- $ExponentBits = 8$

The values $TotalFlopMults$ and $TotalFlopAdds$ were computed following the code given by the micronet challenge. Please see the file *Micronet/Test/compute_flops.py* for implementation details.

Score:

$$score = \frac{MathOps}{10.49\,B} + \frac{Storage}{36.5\,M}$$

Please see the file *Micronet/Test/main.py* for overall implementation details

If one wants to reproduce all the results, please follow the indications given in the different README files.
The order of execution should be :
1/ Training
2/ Pruning
3/ Sparsity
4/ Quantization
5/ Test

To only obtain the final micronet score run the file *MicroNet/Test/main.py* without changing anything.