☐ Ghustwb / MobileNet-SSD-TensorRT

Changes to made for more than 5 classes #9 New issue PiyalGeorge opened this issue on Oct 31, 2018 · 7 comments PiyalGeorge commented on Oct 31, 2018 • edited ▼ Assignees No one assigned Thanks @Ghustwb for this repo. Finally it worked. I trained a model in with 5 classes and it worked. But how to make it work for 7 classes? I mean where all we have to make changes? Labels None vet Ghustwb commented on Oct 31, 2018 Proiects None vet 1. pluginImplement.cpp reshape laver 2. pluginImplement.h softmax 3、pluginImplement.cpp detection_out layer Milestone you could replace "5" with "7" No milestone **Notifications** PiyalGeorge commented on Nov 14, 2018 • edited ▼ Author 3 participants @Ghustwb, extremely Sorry for the late reply. I tried changing following things, but still getting error:-In pluginImplement.cpp line number 369 - mMbox conf reshape = std::unique ptr<Reshape<5>>(new Reshape<5>()); line number 392 - params.numClasses = 5; line number 652 - mMbox_conf_reshape = std::unique_ptr<Reshape<5>>(new Reshape<5>(serialData, serialLength)); In pluginImplement.h line number 150 - assert((inputs[0].d[0])*(inputs[0].d[1]) % 5 == 0); line number 320 - std::unique_ptr<Reshape<5>> mMbox_conf_reshape{ nullptr }; then i clean, cmake, make. when i run the command './build/bin/mobileNet', i get following error $attempting \ to \ open \ cache \ file \ \dots / \dots / model / Mobile Net SSD_deploy. caffemodel. 1. tensor cache \ deploy is a substitution of the sub$ cache file not found, profiling network model ../../model/MobileNetSSD_deploy_iplugin.prototxt ../../model/MobileNetSSD deploy.caffemodel CaffeParser: Could not open file ../../model/MobileNetSSD deploy.caffemodel CaffeParser: Could not parse model file mobileNet: /home/nvidia/MobileNet-SSD-TensorRT-master/tensorNet.cpp:105: bool TensorNet::caffeToTRTModel(const char*, const char*, const std::vector<std::_cxx11::basic_string<char> >&, unsigned int, std::ostream&): Assertion `blobNameToTensor != nullptr' failed. Aborted I also saw this line in pluginImplement.h line number 167, 168 -//cudaSoftmax(8732 *21, 21, (float *) *inputs, static_cast<float *>(*outputs)); $cudaSoftmax(\ \textbf{1917}\ *5,\ 5,\ (float\ *)\ *inputs,\ static_cast<float\ *>(*outputs));$ Do i need to make any change in above line 167, 168 in pluginImplement.h? what is 8732 and 1917? so i need to change that? Is there something else i need to change? Please help PiyalGeorge commented on Nov 15, 2018 • edited ▼ @Ghustwb Please help PiyalGeorge referenced this issue on Nov 15, 2018 many object detecrtion #13 ① Open Ghustwb commented on Nov 16, 2018 • edited ▼ Owner

Sorry for the late reply

```
//cudaSoftmax( 8732 *21, 21, (float *) *inputs, static_cast<float *>(*outputs));
cudaSoftmax( 1917 *5, 5, (float *) *inputs, static_cast<float *>(*outputs));

In SSD, the backbone is VGG16, Conv4_3 (38*38)can get 4 boxes of different widths and heights,
Conv7 (19*19) get 6 boxes, Conv8_2 and Conv9_2 get 6 boxes, Conv 10_2 and Conv11_2 get 4 boxes.
So,

38*38*4+19*19*6+10*10*6+5*5*6+3*3*4+4 = 8732。

In MobileNet-SSD,the backbone is mobileNet,so the number of boxes is different with SSD.
you can read the paper of mobileNet.

If you use 2 classes, you should chage it

cudaSoftmax( 1917 *2, 2, (float *) *inputs, static_cast<float *>(*outputs));
```



PiyalGeorge commented on Nov 19, 2018 • edited ▼ Author Thanks @Ghustwb , Finally figured out. Actually it was simple, but took a lot of time to figure it out. For guys who are still looking for the same answer, give me a smiley here, 😃 , Just kidding. For changing classes from 5 to our custom number of classes make changes in following files: (custom number of classes mentioned here is including background) In pluginImplement.cpp: make change in following lines from 5 to your custom number of classes: 369 392 652 In pluginImplement.h: make change in following lines from 5 to your custom number of classes: 168 320 In MobileNetSSD_deploy_iplugin.prototxt: Change lines, where n is number of classes including background 650 - 15 to n * 3 701 - 30 to n * 6 752 - 30 to n * 6 803 - 30 to n * 6 854 - 30 to n * 6 905 - 30 to n * 6 example, below is for changing 5(including background) classes to 3(including background) 650 - 15 to 9 701 - 30 to 18 752 - 30 to 18 803 - 30 to 18 854 - 30 to 18 905 - 30 to 18 Thanks



xiongdahua555 commented on Nov 28, 2018

@PiyalGeorge just make changes in these files? Need to retrain?



PiyalGeorge commented on Nov 28, 2018

Author

Hi @xiongdahua555, the caffemodel(Mobilenet-ssd) in this repo by Ghustwb is having 5 classes. If you have a custom class trained with similar number of classes, just replace Ghustwb's model with that. and do make changes in above files. Also i got an error when tried the same with 21 classes model(Maybe more changes might be needed, but i didn't checked into that since i already got results with 3). When i tried with 3 classes the above changes gave successful results. Thank you

🛅 PiyalGeorge closed this on Dec 10, 2018