rcmalli / **keras-mobilenet**

Google MobileNet implementation with Keras

keras tensorflow mobilenet

22 commits **2** branches **0** releases **2** contributors MIT

rcmalli ADD bias setting Latest commit `667bb85` on 20 Apr

keras_mobilenet	ADD bias setting	a month ago
tests	ADD shallow option	a month ago
.gitignore	ADD shallow option	a month ago
LICENSE	ADD init	a month ago
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README.md

keras-mobilenet

Google MobileNet Implementation using Keras Framework 2.0

Project Summary

- This project is just the implementation of paper from scratch. I don't have the pretrained weights or GPU's to train :)
- Separable Convolution is already implemented in both Keras and TF but, there is no BN support after Depthwise layers (Still investigating).
- Custom Depthwise Layer is just implemented by changing the source code of Separable Convolution from Keras. Keras: Separable Convolution
- There is probably a typo in Table 1 at the last "Conv dw" layer stride should be 1 according to input sizes.
- Couldn't find any information about the usage of biases at layers (not used as default).

TODO

- [x] Add Custom Depthwise Convolution
- [x] Add BN + RELU layers
- [x] Check layer shapes
- [ ] Test Custom Depthwise Convolution
- [ ] Benchmark training and feedforward pass with both CPU and GPU
- [ ] Compare with SqueezeNet

Library Versions

- Keras v2.0+
- Tensorflow 1.0+ (not supporting Theano for now)

References

1. Keras Framework

2. Google MobileNet Paper

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Note: If you find this project useful, please include reference link in your work.