

Cassava leaf classification

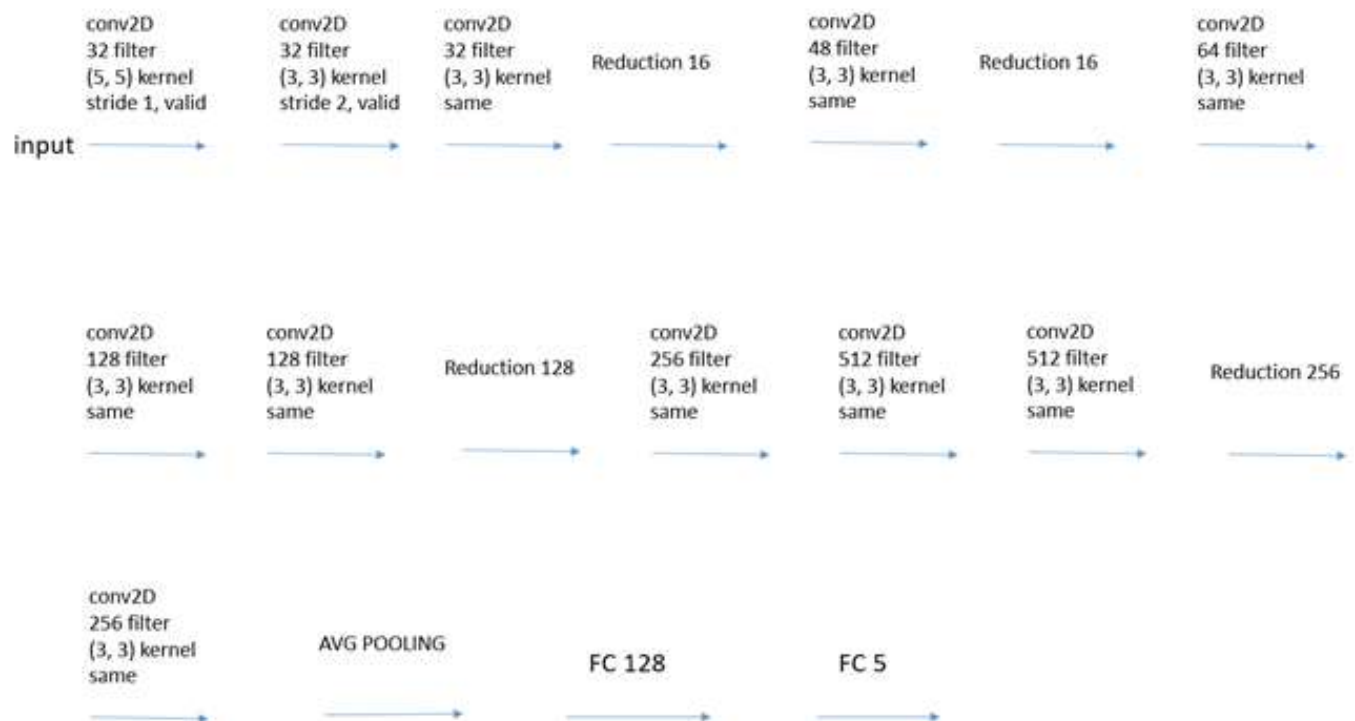
Experimented structures for this competition are:

- 1- resNet. Accuracy = 64%
- 2- googleNet v4. Accuracy = 66%
- 3- testNet1. Accuracy = 68%
- 4- ResNet101v2. Accuracy = 73%
- 5- testNet2. Accuracy = 73%
- 6- testNet3. Accuracy = 77.33%

“testNets” are some networks which structured by myself using “googleNet v4” and “alexNet” ideas.

I used “googleNet v4” idea in order to reduce the dimension which means reducing the dimension not just with pooling layers but with both pooling layers and convolutional layers. We can see this part in the picture below named “reduction”.

And using another idea of “googleNet”s which is “seperable convolution” in order to reduce number of parameters by using two 3×1 and 1×3 together instead of one 3×3 filter which reduce parameters from $3 \times 3 = 9$ to $1 \times 3 + 3 \times 1 = 6$ and that's removing $1/3$ of parameters.



Other features:

Loss function: categorical cross entropy

Optimizer: Adam, learning rate = $0.00001 = 10^{-5}$

Data: augmentation

Regularization terms: dropout and batch normalization.

kaggle

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Late Submission

3233	5	classical mechanics		0.7792	12	3mo
3234	2	jaydeepsb		0.7783	5	3mo
3235	11	SUT_EE_DL2020_98300715		0.7778	4	2mo
3236	32	WANG_CHIEN_AN		0.7757	26	3mo
3237	28	bee_kake		0.7742	5	3mo
3238	1	Joshua Herman		0.7737	9	4mo
3239	3	SUT_EE_DL2020_96109974		0.7733	1	2mo
3240	29	ruanhao_Ai		0.7731	7	2mo
3241	6	kawaguc		0.7730	3	2mo
3242	16	Bergamot		0.7727	8	2mo
3243	2	lhaonan98		0.7722	2	2mo
3244	12	Mohamed Hany	in-CLOC CHN	0.7721	52	3mo
3245	3	yoshi		0.7713	3	2mo
3246	19	Pavlovskiy Evgeniy		0.7702	14	3mo

Competition results