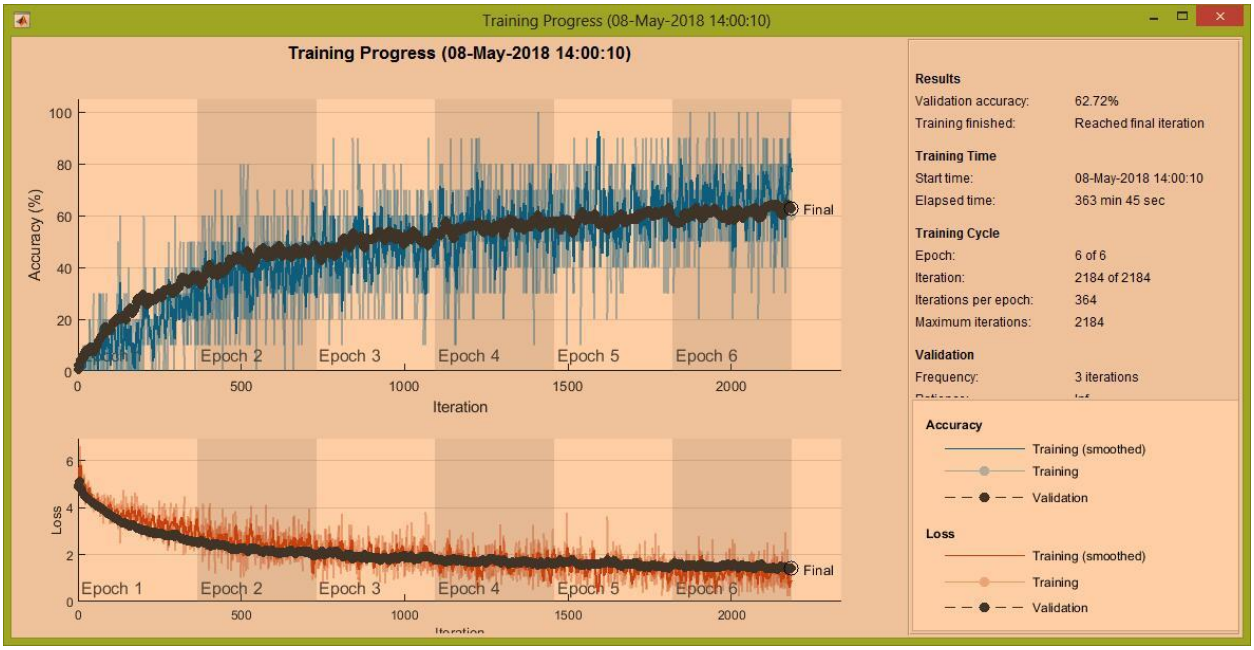
Rob Aga (rra46)
Dailun Cheng (dc924)
CS 5780, Final project report
Team name training: LeBronto
Team name testing: Darren

Our optimal classifier is using transfer learning from AlexNet in MATLAB. We split the training set to 70% training and 30% validation. We use all layers beside the last 3 layers, and replace those with a fully connected layer, a softmax layer, and a final classification layer. All images are resized to 227x227x3 and randomly flip the images on the vertical axis and randomly rotate them up to 30 degrees. Fully connected new layer has a faster learning rate and the original layer has a slower learning rate. We set the batch size to 10 and max of 6 full training cycles (epoch). The network is validated by validation set for every 3 iterations.
The classifier is trained using NVIDIA GeForce GT 750M GPU for a little bit more than 6 hours. The validation accuracy (from 30% training data) converges to 62.72%. The true validation accuracy score is 0.64459. The test accuracy score is 59.923.

Reference:
We first tried this: https://www.mathworks.com/help/vision/ref/trainimagecategoryclassifier.html
Then we settle for using alexnet: https://www.mathworks.com/help/nnet/examples/transfer-learning-using-alexnet.html



35	new	**LeBronto**		0.64459	4	11h

Your Best Entry ↑

Your submission scored 0.64459, which is an improvement of your previous score of 0.46955. Great job! Tweet this!

36	new	**Hi**		0.63013	1	3d
37	new	**Kilian-only Classifier**		0.61948	9	3d
38	new	**weAreNotCelebrities**		0.61796	10	8h
39	▼ 32	**uke**		0.61567	3	10d
40	▼ 31	**ง(͡°)ᕤ ง(͡°)ᕤ ง(͡°)ᕤ**		0.60730	23	12h
41	new	**from God import ***		0.60654	3	17h
42	new	**Wilson Chen**		0.60578	7	5h
43	new	**Wildcats**		0.60502	20	1d
44	new	**nkasturi**		0.60502	1	18h
45	new	**onoudidn't**		0.60502	7	9h
		B-plus		0.60426		

Overview Data Kernels Discussion Leaderboard Rules Join Competition

34	new	**Killian-Only Classifier**		0.66030	1	6h
		B-plus		0.65648		
35	new	**nkasturi**		0.65648	1	5h
36	new	**onoudidn't**		0.65648	1	5h
37	new	**weAreNotCelebrities**		0.65648	1	2h
38	new	**Wildcats**		0.65267	2	9h
39	new	**Hi**		0.64122	2	8h
40	new	**Adam**		0.63740	1	4h
41	new	**RonaldHo**		0.63358	1	19h
42	new	**MitchelFung**		0.62213	1	6h
43	new	**Katerina Prastakou**		0.62213	1	3h
44	new	**uke**		0.61068	1	10h
45	new	**Darren**		0.59923	1	13h
		B		0.57633		