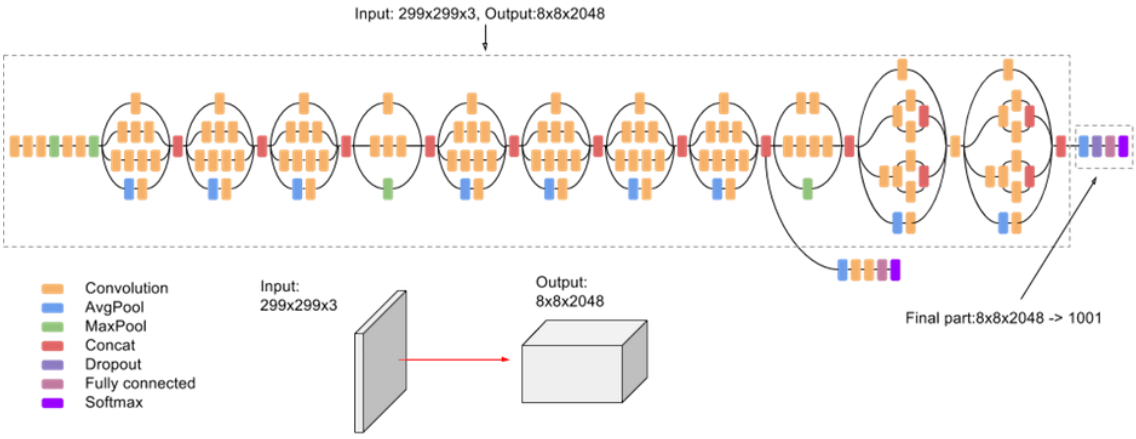
Zero Deforestation mission challenge: CodeMonkey

This model uses transfer learning from the InceptionV3 model trained on ImageNet. Due to the high number of training data and categories types it was thought it would preform good on this dataset as well.



As seen above it's a big and complicated model witch is explained by the creators in http://arxiv.org/abs/1512.00567 . With some minor changes I got an wighted f1 score of 0,72 mostly getting misclassifications on 0 . the changes that where made where removing the top layer which predicts the image in the original. As a replacement 3 dense layers with relu activation and 64,32,32 nodes where added. Further a last SoftMax layer which predicts the 3 classes ended the model

During testing it was found that there was an imbalance in the data which was avoided by changing the class weights hereby the least occurring class was counted 3 times more than the most occurring which evens them out in training.

For why this model predicts better than chance is because the features it has learned on ImageNet are also found here. With a heatmap generated from the models activation we can pinpoint where the model gets its information. Sadly I didn't have time to program this.

Thanks for the chance to play with this data I had a lot of fun