James Landry jtl160130

Abdulmateen Adebiyi aaa170012

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Group Project Proposal

For this project we want to investigate deep reinforcement learning for image classification using glimpse actions. Applying what we have learned so far in class, we should be able to accomplish this task. Using glimpses, it reduces the overall amount of data to process in the Reinforced Neural Network. Also, glimpses can ignore irrelevant parts of the image. The overall idea of glimpses comes from human-eye perception and how humans can recognize objects by quick glimpses. Contours of images can give enough information for a human to accurately classify an object. A blend of Reinforced Neural Networks and Convolutional Neural Networks may yield excellent results for our research.

Convolution neural network has performed extremely well in image classification over the years. We hope that by using reinforced learning and convolutional neural network, we will be able to achieve a good result that is close to the state of the art or outperforms the state of the art. Using glimpses has worked extremely well in visual attention model and it has also been applied in recurrent models and attentive recurrent neural network.

We hope our project will be worthy of publication in a reputable journal .