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1 3 Sentence Summary

Televised chess always has a digital representation of the board which needs an extra person to manage. Modern machine learning and computer vision techniques are very good at classifying and localizing objects. My project plans to implement convolutional neural networks paired with computer vision techniques to autonomously localize of all the pieces on the board from a single camera angle.

2 Project

My part of the project will be more focused on board localization. I will utilize Hough transforms and convolutional neural networks to find the board even if most of it is occluded by the pieces.

3 Summer Work

I learned more about different types of neural networks and learned about more computer vision techniques so I would be better equipped to tackle this problem.

4 Hardware Requirements

We just need a tripod so we can prop up the camera in a stationary position. A phone will just be used for the camera.

5 Partner

My partner is Kevin Fu and he is in Mr. White's section during 1st period. He will be working on the piece classification after my algorithm segments the image into each individual square.