Project Proposal - “Get Chess Board“

Motivation and Goals

Videos on YouTube provide a lot of content for enjoying chess games played and commented on by extraordinary players. The videos also happen to be fast and provide a lot of exposure to chess but they sometimes lack in commentary regarding alternative moves - mostly rightfully so. In such cases, the ability to have an analysis board of the current position open up in a browser could help the viewer study the game more effectively and better answer “what-if” questions that they might have.

With this project, I aim to decrease the friction to study a chess game played on a video platform. This could:

(1) Shorten the feedback-loop on learning by making the analysis board (an infallible guide for almost all purposes) available quicker.
(2) Introduce a programmatic tool for capturing chess games from videos.
(3) Make watching chess videos more fun!

The project will take a screenshot of a chess game on a video platform and return a string that represents the piece placement.

Methodology

I propose to divide the problem into sub-problems that are to be solved one after another. Order is as follows:

(1) Board Detection (Neural Net)
(2) Board Extraction and Splitting into Squares
(3) Piece Classification (Neural Net)
(4) Combine Piece Classifications and Create Piece Placement String

Data

I will collect and label my own data. I plan to save screenshots, manually label the chessboards, divide those into squares, and manually label the squares produced.