Hi, I’m Kevin Fu, and this is my project on Automating Chess Move Notation.

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If you’ve ever watched a televised chess match, you may have noticed that the players in the game usually have something next to their chessboards:

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clipboards, with pens or pencils on top. They need clipboards to write down the moves of the game, so they can study the match later and verify that both players agree on the same move order.

However, those watching the broadcast follow along not on the actual board, but on a digital board to the side of the match, which a human expert must update as the match happens. If the broadcast doesn’t have an expert,

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the viewers themselves must figure out what’s happening on the board from the video, which can be challenging for inexperienced chess players. (Like me.)

Wouldn’t it be better if the process of move transcription was automated? Chess players would have an easier time studying their own games, and chess viewers could follow games without an expert guiding them. (pause)

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Well, thanks to Hough transforms, we can detect the straight lines of a chess board. And with convolutional neural networks, or CNNs, we can identify complex shapes from images, like chess pieces.

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By combining board detection from a Hough transform with piece recognition from a CNN, we’re able to transcribe chess moves from a video feed in real time.