# Poker Hand Detection and Identification

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Project Goal: The project is mainly pipelined into 3 tasks –

1. **Card Detection:** Detect where the cards are in the image. Crop and rotate cards for identification and identify the card and suit using template matching.
2. **Card Identification:** We propose an SVM/Random Forest-Based approach to identify the card(Suit and Value) by feeding a vector of image features(pixels) as input.
3. **Poker Hand Detection:** Using a set of predefined rules, we try to identify the hand of a player from the 7 cards (2 Player's + 5 of Dealer)
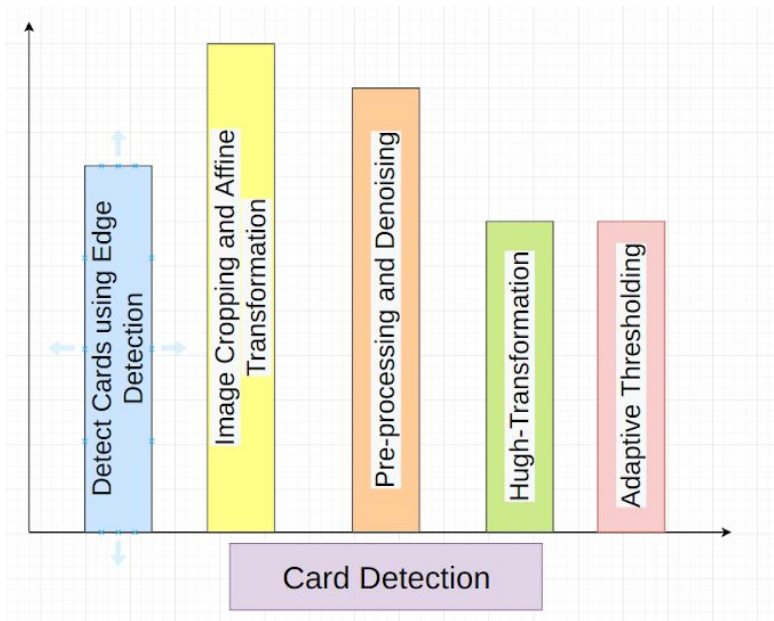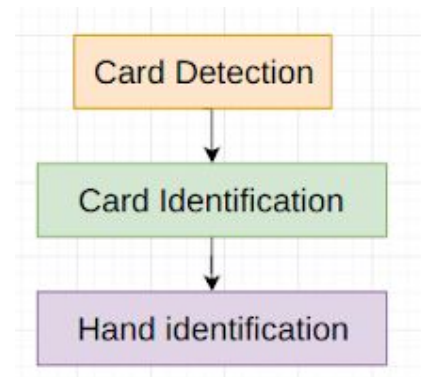
Challenge

Able to identify images in different backgrounds using Adaptive Thresholding.

References:

1. J. Pimentel and A. Bernardino, "A Comparison of Methods for Detection and Recognition of Playing Cards."
2. D. Ballard, "Generalizing the Hough transform to detect arbitrary shapes," Pattern Recognition, vol. 13, no. 2, pp. 111–122, 1981.
3. Martins P., Reis L.P., Teófilo L. (2011) Poker Vision: Playing Cards and Chips Identification Based on Image Processing. In: Vitrià J., Sanches J.M., Hernández M. (eds) Pattern Recognition and Image Analysis.