Input Video

Event Boundary detection (Event Segmentation) Using optical flow

Event Filtration

Extracted events

Event Categorization

HMM based classification

Card events

Goal Events

Goal Attack

Other Events

Track yellow color in specific part of image

Confirm caption and detect yellow card frames

Difference to remove false detected frames

View Classification

HMM Training

Low impact events

High impact events

Nongoal Events

Probable goal events

Edge and Caption Analysis

Difference to remove false detected frames