
Q1

this is a very simple tracking algo for more serious tracking, look-up the papers in the projects pdf

```
FRAME_DIR = '../data/frames/';
DET_DIR = '../data/detections/';
start_frame = 62;
end_frame = 71;
color_bar = ['y','m','c','r','g','b','w','k'];
track = [];
track_id = [];
for i = start_frame:end_frame

    im_cur = imread(fullfile(FRAME_DIR, sprintf('%06d.jpg', i)));
    data = load(fullfile(DET_DIR, sprintf('%06d_dets.mat', i)));
    dets_cur = data.dets;

    im_next = imread(fullfile(FRAME_DIR, sprintf('%06d.jpg', i+1)));
    data = load(fullfile(DET_DIR, sprintf('%06d_dets.mat', i+1)));
    dets_next = data.dets;

    % sim has as many rows as dets_cur and as many columns as
    dets_next
    % sim(k,t) is similarity between detection k in frame i, and
    detection
    % t in frame j
    % sim(k,t)=0 means that k and t should probably not be the same
    track
    sim = compute_similarity(dets_cur, dets_next, im_cur, im_next);

    if i == start_frame
        track = zeros(size(dets_cur,1),size(dets_cur,2),end_frame-
start_frame);
        track(:,:,1) = dets_cur;

        for idx = 1:size(sim,1)
            [value,index] = max(sim(idx,:));
            track_id = [track_id index];
            track(idx,:,2) = dets_next(index,:);
        end

        %plot first frame
        figure;axis ij; hold on
        imagesc(im_cur);
        for box = 1:size(track_id,2)
            showboxes(im_cur,track(box,:,i - start_frame +
1),color_bar(1,box));
        end
    end
end
```

```

        hold off;

    else
        temp_track_id = [];
        for idx = 1:size(track_id,2)
            [value,index] =
max(sim(track_id(size(track_id,1),idx,:),:));
            temp_track_id = [temp_track_id index];
            track(idx,:,i - start_frame + 2) = dets_next(index,:);
        end
        track_id = [track_id;temp_track_id];
    end

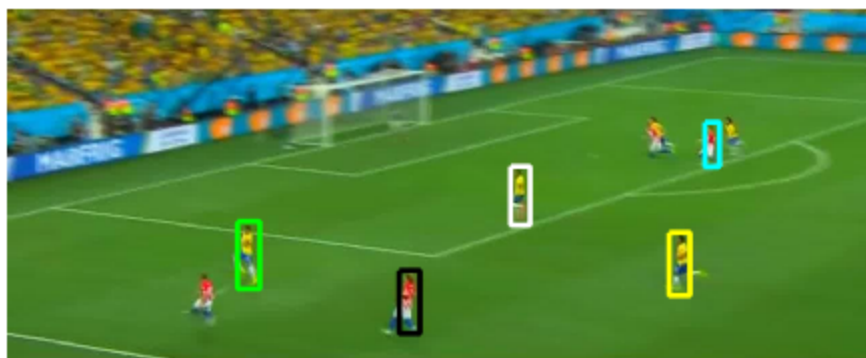
    %plot second frame
    figure;axis ij; hold on
    imagesc(im_next);
    for box = 1:size(track_id,2)
        showboxes(im_next,track(box,:,i - start_frame +
2),color_bar(1,box));
    end
    hold off;
end
end

```













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