

Self-Driving Car Nanodegree

Project 4: Advanced Lane Finding

```
In [1]: #importing some useful packages
import matplotlib.pyplot as plt
import matplotlib.image as mpimg
import numpy as np
import cv2
import math
from math import atan2, hypot # angle and dist
import os
%matplotlib inline
import imageio
imageio.plugins.ffmpeg.download()
# Import everything needed to edit/save/watch video clips
from moviepy.editor import VideoFileClip
from IPython.display import HTML
```

Reading Image

```
In [2]: #reading in an image
images=[]
fns=[]
path = "test_images/"
cnt=0
for fn in os.listdir(path):
    print(cnt, 'Image File:', fn)
    cnt+=1
    image = mpimg.imread(path+fn)
    images.append(image)
    fns.append(fn)
print(image.shape)
# plt.imshow(image) # if you wanted to show a single color channel
# image called 'gray', for example, call as plt.imshow
# plt.show()
```

```
0 Image File: test3.jpg
1 Image File: test1.jpg
2 Image File: test5.jpg
3 Image File: straight_lines2.jpg
4 Image File: test4.jpg
5 Image File: test2.jpg
6 Image File: test6.jpg
7 Image File: straight_lines1.jpg
(720, 1280, 3)
```

```
In [3]: idx = 1
print(fns[idx])
plt.imshow(images[idx])

test1.jpg
```

```
Out[3]: <matplotlib.image.AxesImage at 0x7fc53671e278>
```



Pipe line modules

0. Parameters

```
In [156]: def GetParameters():
    return {'CameraCalibrationFile': './cam_calib.p',
            's_thresh':(170, 255),
            'h_thresh':(42, 80),
            'sx_thresh':(20, 100),
            'Perspect_hx1': 548,
            'Perspect_hx2': 736,
            'Perspect_hy': 461, #the y of the horizon
            'Perspect_offset': 200,
            'ROI_hx1': 629,
            'ROI_hx2': 680,
            'ROI_bx1': 0,
            'ROI_bx2': 1269,
            'ROI_hy':419,
            'Fit_MinPoints': 150,
            'Fit_ClearOut': (500, 800),
            'Fit_MinCurvature': 500,
            'Fit_PositionTolerence': 100,
            'Fit_WidthTolerence': 100,
            'Fit_WindowSize': 10,
            'Fit_ValueThreshold': 0.02,
            'Fit_std': 0.05
    }
Parameters = GetParameters()
```

1. Camera Undistort

```
In [39]: import pickle

dist_pickle = pickle.load(open(Parameters['CameraCalibrationFile'], "rb"))
mtx = dist_pickle["mtx"]
dist = dist_pickle["dist"]

def CamUndistort(image):
    undist = cv2.undistort(image, mtx, dist, None, mtx)
    return undist
```

2. Color and gradient thresholding

```
In [90]: def Thresholding(img):
    s_thresh=Parameters['s_thresh']
    h_thresh=Parameters['h_thresh']
    sx_thresh=Parameters['sx_thresh']
    # Convert to HSV color space and separate the V channel
    hsv = cv2.cvtColor(img, cv2.COLOR_RGB2HLS).astype(np.float)
    h_channel = hsv[:, :, 0]
    l_channel = hsv[:, :, 1]
    s_channel = hsv[:, :, 2]
    # Sobel x
    sobelx = cv2.Sobel(l_channel, cv2.CV_64F, 1, 0) # Take the derivative in x
    abs_sobelx = np.absolute(sobelx) # Absolute x derivative to accentuate lines away from horizontal
    scaled_sobel = np.uint8(255 * abs_sobelx / np.max(abs_sobelx))

    # Threshold x gradient
    sxbinary = np.zeros_like(scaled_sobel)
    sxbinary[(scaled_sobel >= sx_thresh[0]) & (scaled_sobel <= sx_thresh[1])] = 1

    # Threshold color channel
    s_binary = np.zeros_like(s_channel)
    s_binary[(s_channel >= s_thresh[0]) & (s_channel <= s_thresh[1])] = 1

    # Threshold color channel
    h_binary = np.zeros_like(h_channel)
    h_binary[(h_channel >= h_thresh[0]) & (h_channel <= h_thresh[1])] = 1

    # Threshold color channel
    #l_binary = np.zeros_like(l_channel)
    #l_binary[(l_channel >= l_thresh[0]) & (l_channel <= l_thresh[1])] = 1

    # Stack each channel
    # Note color_binary[:, :, 0] is all 0s, effectively an all black image. It might
    # be beneficial to replace this channel with something else.
    color_binary = np.dstack((sxbinary, s_binary, h_binary))

    #merge =np.logical_or(
    #    np.logical_or(sxbinary, s_binary),
    #    np.logical_and(h_binary, l_binary))

    return color_binary
```

3. Region of Interest

```
In [129]: def region_of_interest(img, vertices):
    """
        Applies an image mask.

        Only keeps the region of the image defined by the polygon
        formed from `vertices`. The rest of the image is set to black.
    """
    #defining a blank mask to start with
    mask = np.zeros_like(img)

    #defining a 3 channel or 1 channel color to fill the mask with depending on the input image
    if len(img.shape) > 2:
        channel_count = img.shape[2] # i.e. 3 or 4 depending on your image
        ignore_mask_color = (1,) * channel_count
    else:
        ignore_mask_color = 1

    #filling pixels inside the polygon defined by "vertices" with the fill color
    cv2.fillPoly(mask, vertices, ignore_mask_color)

    #returning the image only where mask pixels are nonzero
    masked_image = cv2.bitwise_and(img, mask)
    return masked_image

def ROI(img):
    imshape = img.shape
    horizon_x1, horizon_x2 = Parameters['ROI_hx1'], Parameters['ROI_hx2']
    bottom_x1, bottom_x2 = Parameters['ROI_bx1'],
    Parameters['ROI_bx2']
    horizon_y = Parameters['ROI_hy']
    vertices = np.array([[(bottom_x1,imshape[0]),(horizon_x1, horizon_y),
                           (horizon_x2, horizon_y),
                           (bottom_x2,imshape[0])]], dtype=np.int32)
    return region_of_interest(img, vertices)
```

4. Perspect Transform

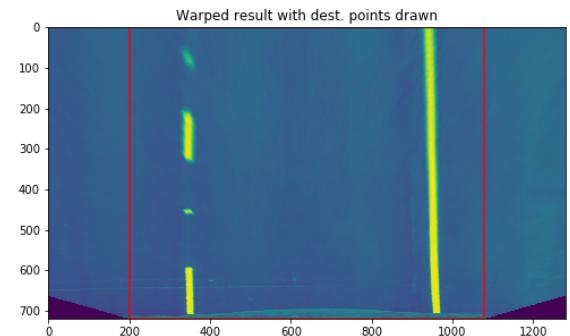
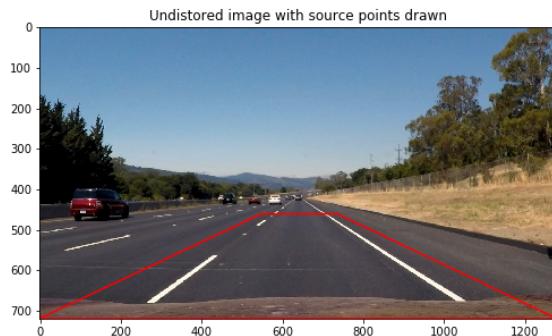
```
In [46]: def PerspectiveTransform(img):
    y, x = img.shape[0], img.shape[1]
    hx1, hx2 = Parameters['Perspect_hx1'], Parameters['Perspect_hx2']
    hy = Parameters['Perspect_hy'] #the horizon
    offset = Parameters['Perspect_offset']
    src = np.float32([[hx1, hy], [hx2, hy], [0, y-1], [x-1, y-1]])
    dst = np.float32([[offset, 0], [x-1-offset, 0], [offset, y-1], [x-1-offset, y-1]])
    #print(src)
    #print(dst)
    M = cv2.getPerspectiveTransform(src, dst)
    warped = cv2.warpPerspective(img, M, (x, y), flags=cv2.INTER_LINEAR)
    # convert to gray scale
    gray = np.mean(warped, axis=2)
    return gray, M
```

```
In [47]: src = np.array([[ 548.,   461.],
                     [ 736.,   461.],
                     [1279.,   719.],
                     [    0.,   719.],[ 548.,   461.]
                    ])

dst = np.array([[ 200.,      0.],
                [1079.,      0.], [1079.,  719.], [ 200.,  719.],[ 200.,      0.]
               ])

image = images[3]
undist = CamUndistort(image)
warped, M = PerspectiveTransform(undist)
plt.figure(figsize=(18,6))
plt.subplot(1,2,1)
plt.imshow(image)
plt.plot(src[:,0],src[:,1], 'r')
plt.title('Undistored image with source points drawn')
plt.subplot(1,2,2)
plt.imshow(warped)
plt.plot(dst[:,0],dst[:,1], 'r')
plt.title('Warped result with dest. points drawn')
```

Out[47]: <matplotlib.text.Text at 0x7fc5289e0a90>



5. Tracking Lanes

```
In [115]: from scipy.ndimage.filters import gaussian_filter1d
from sklearn.metrics import mean_squared_error

def FindPeakInSegment(S, window_size=200):
    m, n = S.shape
    hist = np.mean(S, axis=0)
    ghist = gaussian_filter1d(hist, 40)
    midx = int(n/2)
    lp = np.argmax(ghist[:midx])
    rp = np.argmax(ghist[midx:]) + midx - 1
    return lp, rp, ghist

def CheckTopNoise(PA, center, diffth = 50):
    start = 0
    for i in range(1, PA.shape[0]):
        if PA[i,1]>300:
            break
        xdiff = abs(PA[i,0]-PA[i-1,0])
        if xdiff>diffth:
            if abs(PA[i-1,0]-center)>abs(PA[i,0]-center):
                start=i
                break
    return PA[start:]

def LanePointsSelection(gray, width):
    m, n = gray.shape
    pos_tol = Parameters['Fit_PositionTolerance'] #100
    width_tol = Parameters['Fit_WidthTolerance'] #100
    ws = Parameters['FitWindowSize'] #10
    th = Parameters['Fit_ValueThreshold'] #0.02
    LPS = [] # left lane points
    RPS = [] # right lane points
    gray[:, Parameters['Fit_ClearOut'][0]:Parameters['Fit_ClearOut'][1]]=0
    lc, rc, _ = FindPeakInSegment(gray)
    midx = int((lc+rc)/2)
    #print('Left center:', lc)
    #print('Right center:', rc)
    for cy in range(ws, m-ws):
        S = gray[cy-ws: cy+ws, :]
        lp, rp, ghist = FindPeakInSegment(S)
        lstd = np.std(ghist[:midx])
        rstd = np.std(ghist[midx:])
        #if cy==200:
        #    print('right std:', cy, rstd)
        #    plt.plot(ghist)
        lv, rv = ghist[lp], ghist[rp]
        if lv>th and rv>th:
            if abs((rp-lp)-width) > width_tol:
                continue
        if lv>th and abs(lp-lc)<pos_tol: #position tolerance - diff to
```

```

line center
    if lstd<Parameters['Fit_std']:
        LPS.append([lp, cy])
    if rv>th and abs(rp-rc)<pos_tol:
        if rstd<Parameters['Fit_std']:
            RPS.append([rp, cy])
LPA = np.array(LPS) # left point array
RPA = np.array(RPS) # right point array
LPA = CheckTopNoise(LPA, lc)
RPA = CheckTopNoise(RPA, rc)
return LPA, RPA

def DrawPoints(gray, LPA, RPA):
    plt.figure(figsize=(10,10))
    plt.imshow(gray, cmap='bone')
    if LPA.shape[0]>0:
        plt.plot(LPA[:,0], LPA[:,1],'.r')
    if RPA.shape[0]>0:
        plt.plot(RPA[:,0], RPA[:,1],'.g')

class Line():
    def __init__(self, singleFrameMode=False):
        # was the line detected in the last iteration?
        self.detected = False
        # x values of the last n fits of the line
        self.recent_xfit = []
        #average x values of the fitted line over the last n iteration
        self.bestx = None
        #polynomial coefficients averaged over the last n iterations
        self.best_fit = None
        #polynomial coefficients for the most recent fit
        self.current_fit = [np.array([False])]
        #radius of curvature of the line in some units
        self.radius_of_curvature = None
        #distance in meters of vehicle center from the line
        self.line_base_pos = None
        #difference in fit coefficients between last and new fits
        self.diffs = np.array([0,0,0], dtype='float')
        #x values for detected line pixels
        self.allx = None
        #y values for detected line pixels
        self.ally = None
        imgy = 720
        self.fity = np.linspace(0, imgy-1, imgy)
        self.x_tolerance = 200
        self.singleFrameMode = singleFrameMode
        self.err = None #MSE from raw points

    def AddFittedLine(self, fitx, fit, curv, PA):
        self.detected = True
        if not self.singleFrameMode:
            if not(self.best_fit is None):
                if abs(fitx[-1]-self.best_fit[-1])>self.x_tolerance:
                    self.detected = False
        else:

```

```

        self.detected = True
        if PA.shape[0]<Parameters['Fit_MinPoints']: #too little fitting points
            self.detected = False
            if curv<Parameters['Fit_MinCurvature']: #reject if curvature is too small
                self.detected = False
        if not self.detected:
            return
        self.recent_xfitted.append(fitx)
        if len(self.recent_xfitted)>20:
            self.recent_xfitted.pop(0)
        XS = np.array(self.recent_xfitted)
        self.bestx = np.mean(XS, axis=0)
        self.best_fit = np.polyfit(self.fity, self.bestx, 2)
        if not (self.current_fit is None):
            self.diffs = fit - self.current_fit
        self.current_fit = fit
        self.radius_of_curvature = curv
        self.line_base_pos = self.bestx[-1]
        self.allx = PA[:,0]
        self.ally = PA[:,1]
        fitx_raw = fit[0]*self.ally**2 + fit[1]*self.ally + fit[2]

def TrackingLanes(gray, vis=True):

    lp, rp, hist = FindPeakInSegment(gray)
    #plt.plot(hist)
    width = rp - lp
    #print('Estimated Width:', width)

    LPA, RPA = LanePointsSelection(gray, width)

    if vis==True:
        DrawPoints(gray, LPA, RPA)

    # Fit a second order polynomial to each
    ploty = np.linspace(0, gray.shape[0]-1, gray.shape[0])
    # Get Curvature
    y_eval = np.max(ploty)

    # Define conversions in x and y from pixels space to meters
    ym_per_pix = 30/720 # meters per pixel in y dimension
    xm_per_pix = 3.7/width # meters per pixel in x dimension

    if LPA.shape[0]>0:
        leftx = LPA[:,0]
        lefty = LPA[:,1]
        left_fit = np.polyfit(lefty, leftx, 2)
        left_fitx = left_fit[0]*ploty**2 + left_fit[1]*ploty + left_fit[2]
        left_XS.append(left_fitx) #debug use
        left_fit_cr = np.polyfit(ploty*ym_per_pix, left_fitx*xm_per_pix, 2)
        left_curverad = ((1 + (2*left_fit_cr[0]*y_eval*ym_per_pix + left_fit_cr[1])**2)**1.5) / np.absolute(2*left_fit_cr[0])

```

```

        LeftLine.AddFittedLine(left_fitx, left_fit, left_curverad,
LPA)
    else:
        LeftLine.detected = False
        left_curvrad = None

    if RPA.shape[0]>0:
        rightx = RPA[:,0]
        righty = RPA[:,1]
        right_fit = np.polyfit(righty, rightx, 2)
        right_fitx = right_fit[0]*ploty**2 + right_fit[1]*ploty + righ
t_fit[2]
        right_XS.append(right_fitx)
        right_fit_cr = np.polyfit(ploty*ym_per_pix, right_fitx*xm_per_
pix, 2)
        right_curverad = ((1 + (2*right_fit_cr[0])*y_eval*ym_per_pix +
right_fit_cr[1])**2)**1.5) / np.absolute(2*right_fit_cr[0])
        RightLine.AddFittedLine(right_fitx, right_fit, right_curverad,
RPA)
    else:
        RightLine.detected = False
        right_curverad = None

    if vis==True:
        print('Estimated width (pixel):', width, 'Left Curvature:', le
ft_curverad, 'm',
              'Right Curvature:', right_curverad, 'm')
        if LeftLine.detected:
            plt.plot(left_fitx, ploty, color='yellow')
        else:
            print('Left line is not detected with confidence.')
        plt.plot(right_fitx, ploty, color='yellow')
        if RightLine.detected:
            plt.plot(right_fitx, ploty, color='yellow')
        else:
            print('Right line is not detected with confidence.')

```

6. Validate and inference lanes

```
In [116]: # Depending on global variables LeftLine, RightLine
def ValidateAndInferenceLanes():
    if LeftLine.detected:
        left_fitx = LeftLine.recent_xfitted[-1]

    if not LeftLine.detected:
        left_fitx = LeftLine.bestx

    if RightLine.detected:
        right_fitx = RightLine.recent_xfitted[-1]

    if not RightLine.detected:
        right_fitx = RightLine.bestx
    return left_fitx, right_fitx
```

7. Lane visualization

```
In [117]: # Depending on global variables LeftLine, RightLine
def DrawingLaneCarpet(warped, undist, M, vis=True):
    # Create an image to draw the lines on
    warp_zero = np.zeros_like(warped).astype(np.uint8)
    color_warp = np.dstack((warp_zero, warp_zero, warp_zero))

    left_fitx, right_fitx = ValidateAndInferenceLanes()

    if left_fitx is None or right_fitx is None:
        return None

    ploty = LeftLine.fity
    # Recast the x and y points into usable format for cv2.fillPoly()
    pts_left = np.array([np.transpose(np.vstack([left_fitx, ploty]))])
    pts_right =
    np.array([np.flipud(np.transpose(np.vstack([right_fitx, ploty])))])
    pts = np.hstack((pts_left, pts_right))

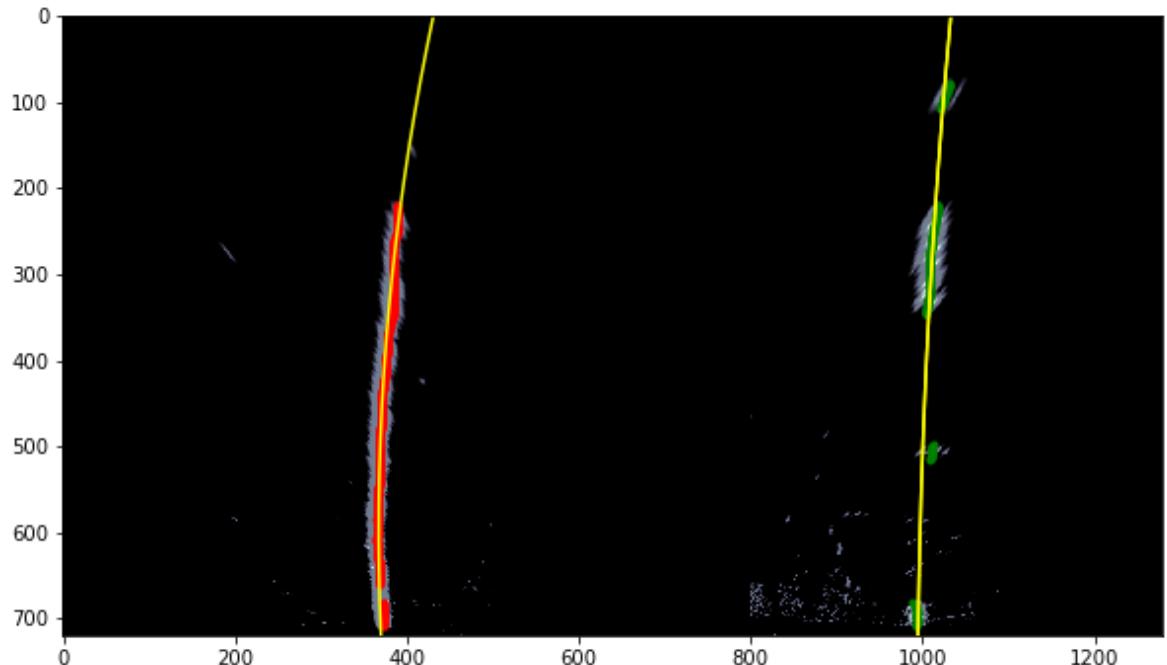
    # Draw the lane onto the warped blank image
    cv2.fillPoly(color_warp, np.int_([pts]), (0,255, 0))

    # Warp the blank back to original image space using inverse perspective matrix (Minv)
    newwarp = cv2.warpPerspective(color_warp, np.linalg.inv(M), (undis-
t.shape[1], undist.shape[0]))
    # Combine the result with the original image
    result = cv2.addWeighted(undist, 1, newwarp, 0.3, 0)
    if vis==True:
        plt.imshow(result)
    return result
```

```
In [118]: plt.figure(figsize=(16, 9))
LeftLine = Line(singleFrameMode=True)
RightLine = Line(singleFrameMode=True)
left_XS = []
right_XS = []
image = images[1]
undist = CamUndistort(image)
mpimg.imsave('output_images/test1_undist.jpg', undist, format='jpg')
thresholded = Thresholding(undist)
mpimg.imsave('output_images/test1_th.jpg', thresholded, format='jpg')
roied = ROI(thresholded)
mpimg.imsave('output_images/test1_roi.jpg', roied, format='jpg')
warped, M = PerspectiveTransform(roied)
mpimg.imsave('output_images/test1_warped.jpg', warped, format='jpg')
TrackingLanes(warped, vis=True)
#mpimg.imsave('output_images/test1_trackedLanes.jpg', undist, format='jpg')
#result = DrawingLaneCarpet(warped, undist, M)
#mpimg.imsave('output_images/test1_final.jpg', result, format='jpg')
```

Estimated width (pixel): 634 Left Curvature: 838.479873977 m Right Curvature: 2658.06537436 m

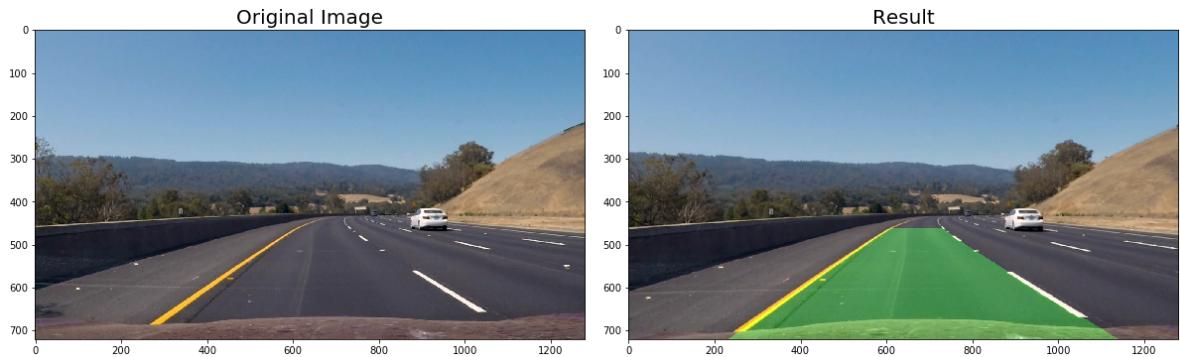
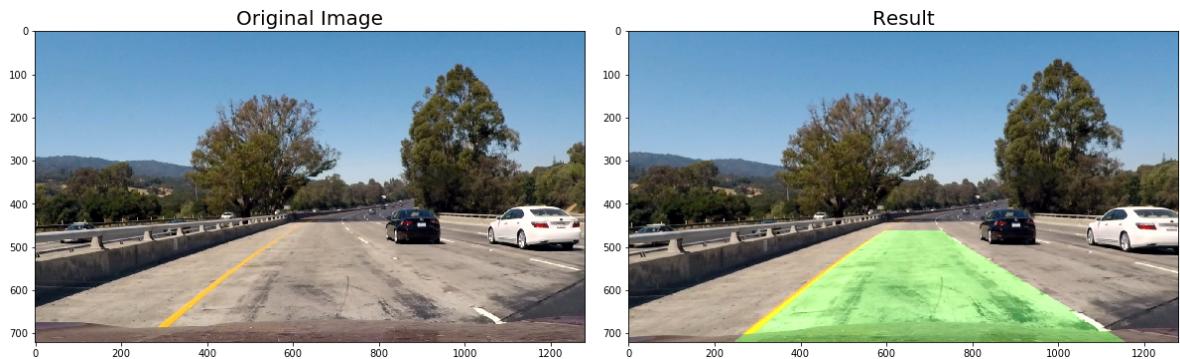
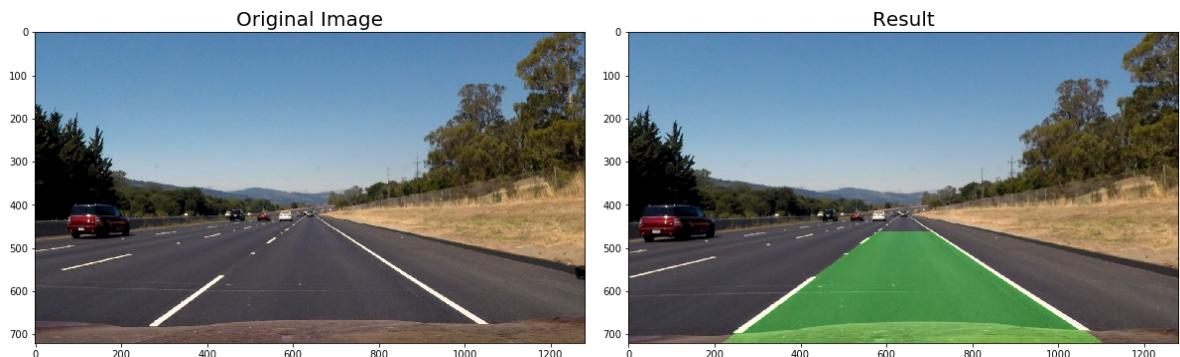
<matplotlib.figure.Figure at 0x7fc50a4bf358>

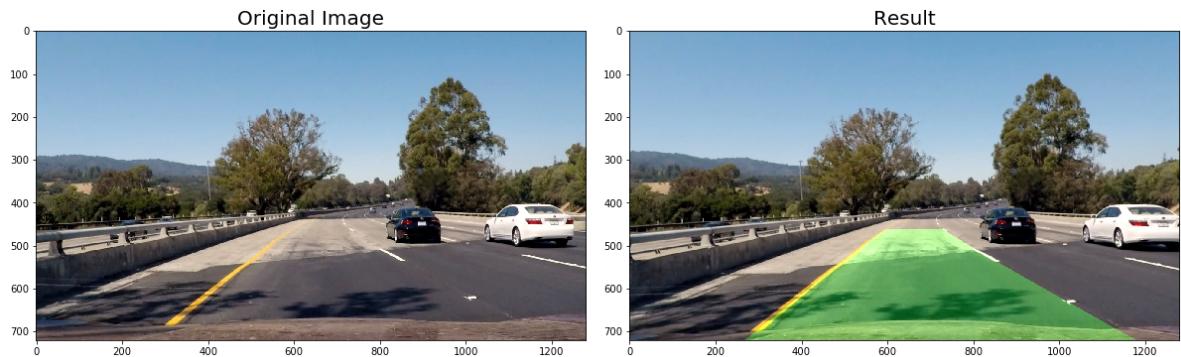


Put together the Pipeline

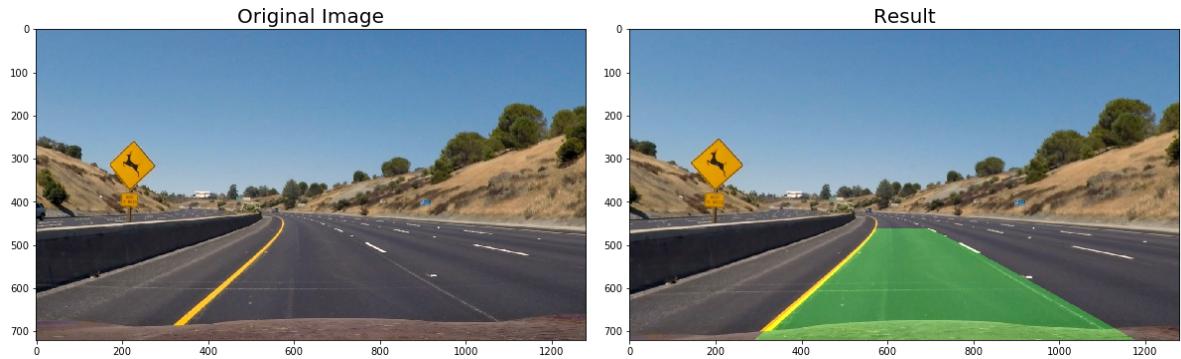
```
In [119]: cnt=0
def Pipeline(image):
    global cnt
    #mpimg.imsave('project_video_input/frame_'+str(cnt).strip()+' .jpg', image, format='jpg')
    undist = CamUndistort(image)
    thresholded = Thresholding(undist)
    roied = ROI(thresholded)
    warped, M = PerspectiveTransform(roied)
    TrackingLanes(warped, vis=False)
    out = DrawingLaneCarpet(warped, undist, M, vis=False)
    if out is None:
        out = undist
    #mpimg.imsave('project_video_output/frame_'+str(cnt).strip()+' .jpg', out, format='jpg')
    cnt+=1
    return out
```

```
In [120]: results=[]
LeftLine = Line(singleFrameMode=True)
RightLine = Line(singleFrameMode=True)
for i in range(len(images)):
    image = images[i]
    print(i, fns[i])
    result = Pipeline(image)
    mpimg.imsave('output_images/'+fn, result, format='jpg')
    results.append(result)
f, (ax1, ax2) = plt.subplots(1, 2, figsize=(16, 6))
f.tight_layout()
ax1.imshow(image)
ax1.set_title('Original Image', fontsize=20)
ax2.imshow(result)
ax2.set_title('Result', fontsize=20)
plt.subplots_adjust(left=0., right=1, top=0.9, bottom=0.)
plt.show()
```

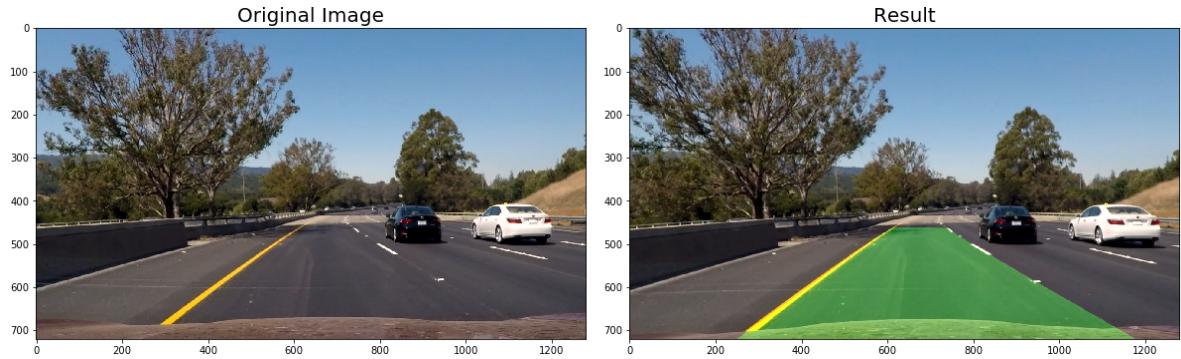
0 test3.jpg**1 test1.jpg****2 test5.jpg****3 straight_lines2.jpg****4 test4.jpg**



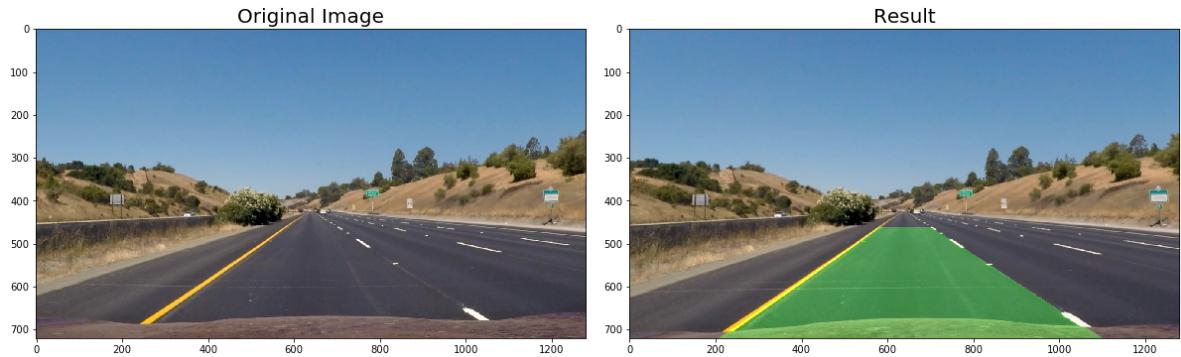
5 test2.jpg



6 test6.jpg



7 straight_lines1.jpg



Processing Video

```
In [19]: import imageio
imageio.plugins.ffmpeg.download()
from moviepy.editor import VideoFileClip
from IPython.display import HTML
```

```
In [157]: clip_output = 'project_video_output.mp4'
clip1 = VideoFileClip("project_video.mp4")
LeftLine = Line(singleFrameMode=False)
RightLine = Line(singleFrameMode=False)
left_XS = []
right_XS = []
cnt=0
Parameters = GetParameters()
print(Parameters)
processor = clip1.fl_image(Pipeline) #NOTE: this function expects color images!!
%time processor.write_videofile(clip_output, audio=False)
```

```
{'CameraCalibrationFile': './cam_calib.p', 's_thresh': (170, 255), 'h_thresh': (42, 80), 'sx_thresh': (20, 100), 'Perspect_hx1': 548, 'Perspect_hx2': 736, 'Perspect_hy': 461, 'Perspect_offset': 200, 'ROI_hx1': 629, 'ROI_hx2': 680, 'ROI_bx1': 0, 'ROI_bx2': 1269, 'ROI_hy': 419, 'Fit_MinPoints': 150, 'Fit_ClearOut': (500, 800), 'Fit_MinCurvature': 500, 'Fit_PositionTolerence': 100, 'Fit_WidthTolerence': 100, 'Fit_WindowSize': 10, 'Fit_ValueThreshold': 0.02, 'Fit_std': 0.05}  
[MoviePy] >>> Building video project_video_output.mp4  
[MoviePy] Writing video project_video_output.mp4
```

0%| | 0/1261 [00:00<?, ?it/s]
0%| | 1/1261 [00:00<08:37, 2.43it/s]
0%| | 2/1261 [00:00<08:30, 2.47it/s]
0%| | 3/1261 [00:01<08:30, 2.47it/s]
0%| | 4/1261 [00:01<08:24, 2.49it/s]
0%| | 5/1261 [00:01<08:15, 2.53it/s]
0%| | 6/1261 [00:02<08:12, 2.55it/s]
1%| | 7/1261 [00:02<08:10, 2.56it/s]
1%| | 8/1261 [00:03<08:14, 2.53it/s]
1%| | 9/1261 [00:03<08:18, 2.51it/s]
1%| | 10/1261 [00:03<08:25, 2.47it/s]
1%| | 11/1261 [00:04<08:25, 2.47it/s]
1%| | 12/1261 [00:04<08:25, 2.47it/s]
1%| | 13/1261 [00:05<08:21, 2.49it/s]
1%| | 14/1261 [00:05<08:11, 2.54it/s]
1%| | 15/1261 [00:05<08:02, 2.58it/s]
1%|| | 16/1261 [00:06<08:01, 2.59it/s]
1%|| | 17/1261 [00:06<08:09, 2.54it/s]
1%|| | 18/1261 [00:07<08:07, 2.55it/s]
2%|| | 19/1261 [00:07<08:11, 2.53it/s]
2%|| | 20/1261 [00:07<08:13, 2.51it/s]
2%|| | 21/1261 [00:08<08:14, 2.51it/s]
2%|| | 22/1261 [00:08<08:17, 2.49it/s]
2%|| | 23/1261 [00:09<08:14, 2.50it/s]
2%|| | 24/1261 [00:09<08:12, 2.51it/s]
2%|| | 25/1261 [00:09<08:07, 2.53it/s]
2%|| | 26/1261 [00:10<08:03, 2.55it/s]
2%|| | 27/1261 [00:10<07:59, 2.57it/s]

2%	28/1261 [00:11<07:55, 2.59it/s]
2%	29/1261 [00:11<07:57, 2.58it/s]
2%	30/1261 [00:11<08:00, 2.56it/s]
2%	31/1261 [00:12<07:59, 2.56it/s]
3%	32/1261 [00:12<08:00, 2.56it/s]
3%	33/1261 [00:13<08:07, 2.52it/s]
3%	34/1261 [00:13<08:12, 2.49it/s]
3%	35/1261 [00:13<08:13, 2.48it/s]
3%	36/1261 [00:14<08:03, 2.54it/s]
3%	37/1261 [00:14<08:08, 2.51it/s]
3%	38/1261 [00:15<08:10, 2.49it/s]
3%	39/1261 [00:15<08:15, 2.47it/s]
3%	40/1261 [00:15<08:15, 2.47it/s]
3%	41/1261 [00:16<08:07, 2.50it/s]
3%	42/1261 [00:16<08:11, 2.48it/s]
3%	43/1261 [00:17<08:15, 2.46it/s]
3%	44/1261 [00:17<08:19, 2.44it/s]
4%	45/1261 [00:17<08:14, 2.46it/s]
4%	46/1261 [00:18<08:04, 2.51it/s]
4%	47/1261 [00:18<08:08, 2.49it/s]
4%	48/1261 [00:19<07:56, 2.55it/s]
4%	49/1261 [00:19<07:57, 2.54it/s]
4%	50/1261 [00:19<08:02, 2.51it/s]
4%	51/1261 [00:20<07:56, 2.54it/s]
4%	52/1261 [00:20<07:45, 2.60it/s]
4%	53/1261 [00:20<07:27, 2.70it/s]
4%	54/1261 [00:21<07:20, 2.74it/s]
4%	55/1261 [00:21<07:13, 2.78it/s]
4%	56/1261 [00:22<07:12, 2.78it/s]

5%| | 57/1261 [00:22<07:08, 2.81it/s]
5%| | 58/1261 [00:22<07:02, 2.85it/s]
5%| | 59/1261 [00:23<07:09, 2.80it/s]
5%| | 60/1261 [00:23<07:05, 2.82it/s]
5%| | 61/1261 [00:23<07:09, 2.79it/s]
5%| | 62/1261 [00:24<07:11, 2.78it/s]
5%| | 63/1261 [00:24<07:06, 2.81it/s]
5%| | 64/1261 [00:24<07:01, 2.84it/s]
5%| | 65/1261 [00:25<06:56, 2.87it/s]
5%| | 66/1261 [00:25<06:56, 2.87it/s]
5%| | 67/1261 [00:25<06:51, 2.90it/s]
5%| | 68/1261 [00:26<06:49, 2.91it/s]
5%| | 69/1261 [00:26<06:50, 2.90it/s]
6%| | 70/1261 [00:26<06:47, 2.92it/s]
6%| | 71/1261 [00:27<06:48, 2.91it/s]
6%| | 72/1261 [00:27<06:48, 2.91it/s]
6%| | 73/1261 [00:27<06:49, 2.90it/s]
6%| | 74/1261 [00:28<06:49, 2.90it/s]
6%| | 75/1261 [00:28<06:46, 2.92it/s]
6%| | 76/1261 [00:28<06:43, 2.93it/s]
6%| | 77/1261 [00:29<06:43, 2.94it/s]
6%| | 78/1261 [00:29<06:43, 2.94it/s]
6%| | 79/1261 [00:29<06:44, 2.92it/s]
6%| | 80/1261 [00:30<06:43, 2.92it/s]
6%| | 81/1261 [00:30<06:41, 2.94it/s]
7%| | 82/1261 [00:30<06:41, 2.94it/s]
7%| | 83/1261 [00:31<06:43, 2.92it/s]
7%| | 84/1261 [00:31<06:42, 2.93it/s]

7%|██████████ | 85/1261 [00:32<06:39, 2.94it/s]
7%|██████████ | 86/1261 [00:32<06:40, 2.93it/s]
7%|██████████ | 87/1261 [00:32<06:42, 2.91it/s]
7%|██████████ | 88/1261 [00:33<06:42, 2.91it/s]
7%|██████████ | 89/1261 [00:33<06:41, 2.92it/s]
7%|██████████ | 90/1261 [00:33<06:41, 2.92it/s]
7%|██████████ | 91/1261 [00:34<06:42, 2.91it/s]
7%|██████████ | 92/1261 [00:34<06:38, 2.93it/s]
7%|██████████ | 93/1261 [00:34<06:38, 2.93it/s]
7%|██████████ | 94/1261 [00:35<06:39, 2.92it/s]
8%|██████████ | 95/1261 [00:35<06:40, 2.91it/s]
8%|██████████ | 96/1261 [00:35<06:43, 2.89it/s]
8%|██████████ | 97/1261 [00:36<06:37, 2.93it/s]
8%|██████████ | 98/1261 [00:36<06:37, 2.92it/s]
8%|██████████ | 99/1261 [00:36<06:39, 2.91it/s]
8%|██████████ | 100/1261 [00:37<06:39, 2.91it/s]
8%|██████████ | 101/1261 [00:37<06:36, 2.93it/s]
8%|██████████ | 102/1261 [00:37<06:36, 2.92it/s]
8%|██████████ | 103/1261 [00:38<06:37, 2.91it/s]
8%|██████████ | 104/1261 [00:38<06:41, 2.88it/s]
8%|██████████ | 105/1261 [00:38<06:36, 2.91it/s]
8%|██████████ | 106/1261 [00:39<06:31, 2.95it/s]
8%|██████████ | 107/1261 [00:39<06:31, 2.95it/s]
9%|██████████ | 108/1261 [00:39<06:33, 2.93it/s]
9%|██████████ | 109/1261 [00:40<06:30, 2.95it/s]
9%|██████████ | 110/1261 [00:40<06:32, 2.93it/s]
9%|██████████ | 111/1261 [00:40<06:35, 2.91it/s]
9%|██████████ | 112/1261 [00:41<06:34, 2.91it/s]
9%|██████████ | 113/1261 [00:41<06:35, 2.90it/s]

9%|█ | 114/1261 [00:41<06:38, 2.88it/s]
9%|█ | 115/1261 [00:42<06:34, 2.90it/s]
9%|█ | 116/1261 [00:42<06:31, 2.92it/s]
9%|█ | 117/1261 [00:42<06:27, 2.95it/s]
9%|█ | 118/1261 [00:43<06:24, 2.98it/s]
9%|█ | 119/1261 [00:43<06:31, 2.91it/s]
10%|█ | 120/1261 [00:44<06:27, 2.94it/s]
10%|█ | 121/1261 [00:44<06:32, 2.91it/s]
10%|█ | 122/1261 [00:44<06:34, 2.89it/s]
10%|█ | 123/1261 [00:45<06:36, 2.87it/s]
10%|█ | 124/1261 [00:45<06:34, 2.88it/s]
10%|█ | 125/1261 [00:45<06:35, 2.87it/s]
10%|█ | 126/1261 [00:46<06:30, 2.90it/s]
10%|█ | 127/1261 [00:46<06:29, 2.91it/s]
10%|█ | 128/1261 [00:46<06:29, 2.91it/s]
10%|█ | 129/1261 [00:47<06:36, 2.85it/s]
10%|█ | 130/1261 [00:47<06:32, 2.88it/s]
10%|█ | 131/1261 [00:47<06:28, 2.91it/s]
10%|█ | 132/1261 [00:48<06:27, 2.91it/s]
11%|█ | 133/1261 [00:48<06:37, 2.84it/s]
11%|█ | 134/1261 [00:48<06:33, 2.86it/s]
11%|█ | 135/1261 [00:49<06:32, 2.87it/s]
11%|█ | 136/1261 [00:49<06:30, 2.88it/s]
11%|█ | 137/1261 [00:49<06:28, 2.89it/s]
11%|█ | 138/1261 [00:50<06:29, 2.88it/s]
11%|█ | 139/1261 [00:50<06:30, 2.87it/s]
11%|█ | 140/1261 [00:50<06:26, 2.90it/s]
11%|█ | 141/1261 [00:51<06:22, 2.93it/s]

11% █	142/1261 [00:51<06:20, 2.94it/s]
11% █	143/1261 [00:51<06:14, 2.99it/s]
11% █	144/1261 [00:52<06:14, 2.98it/s]
11% █	145/1261 [00:52<06:16, 2.96it/s]
12% █	146/1261 [00:52<06:15, 2.97it/s]
12% █	147/1261 [00:53<06:18, 2.95it/s]
12% █	148/1261 [00:53<06:20, 2.92it/s]
12% █	149/1261 [00:53<06:19, 2.93it/s]
12% █	150/1261 [00:54<06:16, 2.95it/s]
12% █	151/1261 [00:54<06:17, 2.94it/s]
12% █	152/1261 [00:55<06:21, 2.91it/s]
12% █	153/1261 [00:55<06:20, 2.91it/s]
12% █	154/1261 [00:55<06:20, 2.91it/s]
12% █	155/1261 [00:56<06:18, 2.92it/s]
12% █	156/1261 [00:56<06:21, 2.89it/s]
12% █	157/1261 [00:56<06:19, 2.91it/s]
13% █	158/1261 [00:57<06:17, 2.92it/s]
13% █	159/1261 [00:57<06:12, 2.96it/s]
13% █	160/1261 [00:57<06:11, 2.96it/s]
13% █	161/1261 [00:58<06:13, 2.95it/s]
13% █	162/1261 [00:58<06:12, 2.95it/s]
13% █	163/1261 [00:58<06:09, 2.97it/s]
13% █	164/1261 [00:59<06:07, 2.99it/s]
13% █	165/1261 [00:59<06:12, 2.94it/s]
13% █	166/1261 [00:59<06:14, 2.93it/s]
13% █	167/1261 [01:00<06:12, 2.93it/s]
13% █	168/1261 [01:00<06:08, 2.97it/s]
13% █	169/1261 [01:00<06:16, 2.90it/s]
13% █	170/1261 [01:01<06:10, 2.95it/s]

14% █	171/1261 [01:01<06:10, 2.94it/s]
14% █	172/1261 [01:01<06:09, 2.95it/s]
14% █	173/1261 [01:02<06:10, 2.94it/s]
14% █	174/1261 [01:02<06:10, 2.93it/s]
14% █	175/1261 [01:02<06:13, 2.91it/s]
14% █	176/1261 [01:03<06:13, 2.91it/s]
14% █	177/1261 [01:03<06:10, 2.93it/s]
14% █	178/1261 [01:03<06:06, 2.96it/s]
14% █	179/1261 [01:04<06:05, 2.96it/s]
14% █	180/1261 [01:04<06:07, 2.94it/s]
14% █	181/1261 [01:04<06:04, 2.96it/s]
14% █	182/1261 [01:05<06:03, 2.96it/s]
15% █	183/1261 [01:05<06:05, 2.95it/s]
15% █	184/1261 [01:05<06:06, 2.94it/s]
15% █	185/1261 [01:06<06:08, 2.92it/s]
15% █	186/1261 [01:06<06:08, 2.92it/s]
15% █	187/1261 [01:06<06:07, 2.93it/s]
15% █	188/1261 [01:07<06:03, 2.95it/s]
15% █	189/1261 [01:07<06:01, 2.97it/s]
15% █	190/1261 [01:07<05:59, 2.98it/s]
15% █	191/1261 [01:08<05:56, 3.00it/s]
15% █	192/1261 [01:08<05:53, 3.02it/s]
15% █	193/1261 [01:08<05:55, 3.00it/s]
15% █	194/1261 [01:09<05:59, 2.97it/s]
15% █	195/1261 [01:09<06:02, 2.94it/s]
16% █	196/1261 [01:09<06:01, 2.94it/s]
16% █	197/1261 [01:10<06:05, 2.91it/s]
16% █	198/1261 [01:10<06:03, 2.92it/s]

16% █	199/1261 [01:10<06:04, 2.91it/s]
16% █	200/1261 [01:11<06:02, 2.92it/s]
16% █	201/1261 [01:11<06:04, 2.91it/s]
16% █	202/1261 [01:12<06:05, 2.90it/s]
16% █	203/1261 [01:12<06:05, 2.90it/s]
16% █	204/1261 [01:12<06:03, 2.91it/s]
16% █	205/1261 [01:13<06:05, 2.89it/s]
16% █	206/1261 [01:13<06:10, 2.85it/s]
16% █	207/1261 [01:13<06:10, 2.84it/s]
16% █	208/1261 [01:14<06:08, 2.85it/s]
17% █	209/1261 [01:14<06:05, 2.88it/s]
17% █	210/1261 [01:14<06:06, 2.87it/s]
17% █	211/1261 [01:15<06:03, 2.89it/s]
17% █	212/1261 [01:15<06:02, 2.90it/s]
17% █	213/1261 [01:15<06:03, 2.88it/s]
17% █	214/1261 [01:16<06:01, 2.89it/s]
17% █	215/1261 [01:16<06:01, 2.90it/s]
17% █	216/1261 [01:16<06:03, 2.87it/s]
17% █	217/1261 [01:17<05:58, 2.91it/s]
17% █	218/1261 [01:17<05:57, 2.91it/s]
17% █	219/1261 [01:17<05:55, 2.93it/s]
17% █	220/1261 [01:18<05:55, 2.93it/s]
18% █	221/1261 [01:18<05:52, 2.95it/s]
18% █	222/1261 [01:18<05:54, 2.93it/s]
18% █	223/1261 [01:19<05:52, 2.94it/s]
18% █	224/1261 [01:19<05:49, 2.96it/s]
18% █	225/1261 [01:19<05:51, 2.95it/s]
18% █	226/1261 [01:20<05:56, 2.90it/s]
18% █	227/1261 [01:20<05:54, 2.92it/s]

18% █	228/1261 [01:20<05:52, 2.93it/s]
18% █	229/1261 [01:21<05:52, 2.93it/s]
18% █	230/1261 [01:21<05:51, 2.93it/s]
18% █	231/1261 [01:21<05:51, 2.93it/s]
18% █	232/1261 [01:22<05:46, 2.97it/s]
18% █	233/1261 [01:22<05:47, 2.96it/s]
19% █	234/1261 [01:22<05:45, 2.97it/s]
19% █	235/1261 [01:23<05:52, 2.91it/s]
19% █	236/1261 [01:23<05:52, 2.91it/s]
19% █	237/1261 [01:24<05:53, 2.90it/s]
19% █	238/1261 [01:24<05:48, 2.94it/s]
19% █	239/1261 [01:24<05:45, 2.96it/s]
19% █	240/1261 [01:25<05:47, 2.94it/s]
19% █	241/1261 [01:25<05:44, 2.96it/s]
19% █	242/1261 [01:25<05:42, 2.97it/s]
19% █	243/1261 [01:26<05:45, 2.95it/s]
19% █	244/1261 [01:26<05:41, 2.97it/s]
19% █	245/1261 [01:26<05:40, 2.98it/s]
20% █	246/1261 [01:27<05:43, 2.96it/s]
20% █	247/1261 [01:27<05:43, 2.95it/s]
20% █	248/1261 [01:27<05:44, 2.94it/s]
20% █	249/1261 [01:28<05:45, 2.93it/s]
20% █	250/1261 [01:28<05:44, 2.93it/s]
20% █	251/1261 [01:28<05:46, 2.91it/s]
20% █	252/1261 [01:29<05:44, 2.93it/s]
20% █	253/1261 [01:29<05:43, 2.93it/s]
20% █	254/1261 [01:29<05:45, 2.92it/s]
20% █	255/1261 [01:30<05:44, 2.92it/s]

20% ██████	256/1261 [01:30<05:43, 2.92it/s]
20% ██████	257/1261 [01:30<05:39, 2.96it/s]
20% ██████	258/1261 [01:31<05:39, 2.96it/s]
21% ██████	259/1261 [01:31<05:39, 2.95it/s]
21% ██████	260/1261 [01:31<05:42, 2.93it/s]
21% ██████	261/1261 [01:32<05:38, 2.95it/s]
21% ██████	262/1261 [01:32<05:41, 2.93it/s]
21% ██████	263/1261 [01:32<05:35, 2.98it/s]
21% ██████	264/1261 [01:33<05:36, 2.96it/s]
21% ██████	265/1261 [01:33<05:43, 2.90it/s]
21% ██████	266/1261 [01:33<05:49, 2.85it/s]
21% ██████	267/1261 [01:34<05:42, 2.90it/s]
21% ██████	268/1261 [01:34<05:41, 2.91it/s]
21% ██████	269/1261 [01:34<05:41, 2.91it/s]
21% ██████	270/1261 [01:35<05:39, 2.92it/s]
21% ██████	271/1261 [01:35<05:37, 2.93it/s]
22% ██████	272/1261 [01:35<05:38, 2.92it/s]
22% ██████	273/1261 [01:36<05:41, 2.90it/s]
22% ██████	274/1261 [01:36<05:39, 2.91it/s]
22% ██████	275/1261 [01:36<05:38, 2.91it/s]
22% ██████	276/1261 [01:37<05:35, 2.94it/s]
22% ██████	277/1261 [01:37<05:35, 2.94it/s]
22% ██████	278/1261 [01:38<05:33, 2.95it/s]
22% ██████	279/1261 [01:38<05:33, 2.94it/s]
22% ██████	280/1261 [01:38<05:33, 2.94it/s]
22% ██████	281/1261 [01:39<05:34, 2.93it/s]
22% ██████	282/1261 [01:39<05:34, 2.92it/s]
22% ██████	283/1261 [01:39<05:35, 2.91it/s]
23% ██████	284/1261 [01:40<05:38, 2.89it/s]

23%|██████ | 285/1261 [01:40<05:39, 2.87it/s]
23%|██████ | 286/1261 [01:40<05:40, 2.86it/s]
23%|██████ | 287/1261 [01:41<05:37, 2.89it/s]
23%|██████ | 288/1261 [01:41<05:38, 2.87it/s]
23%|██████ | 289/1261 [01:41<05:41, 2.84it/s]
23%|██████ | 290/1261 [01:42<05:38, 2.87it/s]
23%|██████ | 291/1261 [01:42<05:37, 2.87it/s]
23%|██████ | 292/1261 [01:42<05:32, 2.92it/s]
23%|██████ | 293/1261 [01:43<05:28, 2.94it/s]
23%|██████ | 294/1261 [01:43<05:26, 2.96it/s]
23%|██████ | 295/1261 [01:43<05:28, 2.94it/s]
23%|██████ | 296/1261 [01:44<05:29, 2.93it/s]
24%|██████ | 297/1261 [01:44<05:30, 2.92it/s]
24%|██████ | 298/1261 [01:44<05:26, 2.95it/s]
24%|██████ | 299/1261 [01:45<05:25, 2.96it/s]
24%|██████ | 300/1261 [01:45<05:31, 2.90it/s]
24%|██████ | 301/1261 [01:45<05:29, 2.91it/s]
24%|██████ | 302/1261 [01:46<05:25, 2.95it/s]
24%|██████ | 303/1261 [01:46<05:26, 2.94it/s]
24%|██████ | 304/1261 [01:46<05:25, 2.94it/s]
24%|██████ | 305/1261 [01:47<05:24, 2.95it/s]
24%|██████ | 306/1261 [01:47<05:23, 2.95it/s]
24%|██████ | 307/1261 [01:47<05:25, 2.94it/s]
24%|██████ | 308/1261 [01:48<05:26, 2.92it/s]
25%|██████ | 309/1261 [01:48<05:25, 2.93it/s]
25%|██████ | 310/1261 [01:48<05:25, 2.92it/s]
25%|██████ | 311/1261 [01:49<05:27, 2.90it/s]
25%|██████ | 312/1261 [01:49<05:29, 2.88it/s]

25% [■]	313/1261 [01:50<05:25, 2.91it/s]
25% [■]	314/1261 [01:50<05:29, 2.87it/s]
25% [■]	315/1261 [01:50<05:25, 2.91it/s]
25% [■]	316/1261 [01:51<05:21, 2.94it/s]
25% [■]	317/1261 [01:51<05:19, 2.96it/s]
25% [■]	318/1261 [01:51<05:18, 2.96it/s]
25% [■]	319/1261 [01:52<05:18, 2.96it/s]
25% [■]	320/1261 [01:52<05:14, 3.00it/s]
25% [■]	321/1261 [01:52<05:16, 2.97it/s]
26% [■]	322/1261 [01:53<05:18, 2.95it/s]
26% [■]	323/1261 [01:53<05:19, 2.94it/s]
26% [■]	324/1261 [01:53<05:16, 2.96it/s]
26% [■]	325/1261 [01:54<05:17, 2.95it/s]
26% [■]	326/1261 [01:54<05:18, 2.93it/s]
26% [■]	327/1261 [01:54<05:18, 2.93it/s]
26% [■]	328/1261 [01:55<05:20, 2.91it/s]
26% [■]	329/1261 [01:55<05:19, 2.91it/s]
26% [■]	330/1261 [01:55<05:18, 2.93it/s]
26% [■]	331/1261 [01:56<05:18, 2.92it/s]
26% [■]	332/1261 [01:56<05:20, 2.90it/s]
26% [■]	333/1261 [01:56<05:22, 2.88it/s]
26% [■]	334/1261 [01:57<05:24, 2.86it/s]
27% [■]	335/1261 [01:57<05:20, 2.89it/s]
27% [■]	336/1261 [01:57<05:17, 2.92it/s]
27% [■]	337/1261 [01:58<05:15, 2.93it/s]
27% [■]	338/1261 [01:58<05:14, 2.93it/s]
27% [■]	339/1261 [01:58<05:15, 2.92it/s]
27% [■]	340/1261 [01:59<05:13, 2.94it/s]
27% [■]	341/1261 [01:59<05:22, 2.86it/s]

27% [■]	342/1261 [01:59<05:18, 2.88it/s]
27% [■]	343/1261 [02:00<05:16, 2.90it/s]
27% [■]	344/1261 [02:00<05:13, 2.93it/s]
27% [■]	345/1261 [02:00<05:12, 2.93it/s]
27% [■]	346/1261 [02:01<05:13, 2.92it/s]
28% [■]	347/1261 [02:01<05:15, 2.90it/s]
28% [■]	348/1261 [02:02<05:14, 2.90it/s]
28% [■]	349/1261 [02:02<05:13, 2.91it/s]
28% [■]	350/1261 [02:02<05:15, 2.89it/s]
28% [■]	351/1261 [02:03<05:18, 2.86it/s]
28% [■]	352/1261 [02:03<05:16, 2.87it/s]
28% [■]	353/1261 [02:03<05:12, 2.90it/s]
28% [■]	354/1261 [02:04<05:12, 2.90it/s]
28% [■]	355/1261 [02:04<05:10, 2.92it/s]
28% [■]	356/1261 [02:04<05:11, 2.91it/s]
28% [■]	357/1261 [02:05<05:13, 2.88it/s]
28% [■]	358/1261 [02:05<05:11, 2.90it/s]
28% [■]	359/1261 [02:05<05:11, 2.90it/s]
29% [■]	360/1261 [02:06<05:11, 2.89it/s]
29% [■]	361/1261 [02:06<05:11, 2.89it/s]
29% [■]	362/1261 [02:06<05:10, 2.90it/s]
29% [■]	363/1261 [02:07<05:14, 2.86it/s]
29% [■]	364/1261 [02:07<05:10, 2.89it/s]
29% [■]	365/1261 [02:07<05:10, 2.89it/s]
29% [■]	366/1261 [02:08<05:07, 2.91it/s]
29% [■]	367/1261 [02:08<05:08, 2.90it/s]
29% [■]	368/1261 [02:08<05:06, 2.92it/s]
29% [■]	369/1261 [02:09<05:05, 2.92it/s]

29% [REDACTED]	370/1261 [02:09<05:01, 2.96it/s]
29% [REDACTED]	371/1261 [02:09<05:02, 2.94it/s]
30% [REDACTED]	372/1261 [02:10<05:00, 2.96it/s]
30% [REDACTED]	373/1261 [02:10<05:02, 2.94it/s]
30% [REDACTED]	374/1261 [02:10<05:02, 2.93it/s]
30% [REDACTED]	375/1261 [02:11<05:04, 2.91it/s]
30% [REDACTED]	376/1261 [02:11<05:05, 2.90it/s]
30% [REDACTED]	377/1261 [02:11<05:07, 2.88it/s]
30% [REDACTED]	378/1261 [02:12<05:04, 2.90it/s]
30% [REDACTED]	379/1261 [02:12<05:05, 2.88it/s]
30% [REDACTED]	380/1261 [02:13<05:03, 2.90it/s]
30% [REDACTED]	381/1261 [02:13<04:58, 2.95it/s]
30% [REDACTED]	382/1261 [02:13<04:59, 2.93it/s]
30% [REDACTED]	383/1261 [02:14<05:00, 2.92it/s]
30% [REDACTED]	384/1261 [02:14<05:05, 2.87it/s]
31% [REDACTED]	385/1261 [02:14<05:03, 2.89it/s]
31% [REDACTED]	386/1261 [02:15<05:04, 2.87it/s]
31% [REDACTED]	387/1261 [02:15<05:00, 2.91it/s]
31% [REDACTED]	388/1261 [02:15<04:58, 2.92it/s]
31% [REDACTED]	389/1261 [02:16<04:55, 2.95it/s]
31% [REDACTED]	390/1261 [02:16<04:58, 2.92it/s]
31% [REDACTED]	391/1261 [02:16<04:57, 2.92it/s]
31% [REDACTED]	392/1261 [02:17<05:01, 2.89it/s]
31% [REDACTED]	393/1261 [02:17<04:58, 2.91it/s]
31% [REDACTED]	394/1261 [02:17<04:56, 2.93it/s]
31% [REDACTED]	395/1261 [02:18<04:58, 2.91it/s]
31% [REDACTED]	396/1261 [02:18<04:56, 2.92it/s]
31% [REDACTED]	397/1261 [02:18<04:54, 2.93it/s]
32% [REDACTED]	398/1261 [02:19<04:53, 2.94it/s]

32% [■]	399/1261 [02:19<04:52, 2.95it/s]
32% [■]	400/1261 [02:19<04:54, 2.93it/s]
32% [■]	401/1261 [02:20<04:51, 2.95it/s]
32% [■]	402/1261 [02:20<04:52, 2.94it/s]
32% [■]	403/1261 [02:20<04:50, 2.95it/s]
32% [■]	404/1261 [02:21<04:50, 2.95it/s]
32% [■]	405/1261 [02:21<04:50, 2.94it/s]
32% [■]	406/1261 [02:21<04:51, 2.93it/s]
32% [■]	407/1261 [02:22<04:50, 2.94it/s]
32% [■]	408/1261 [02:22<04:48, 2.96it/s]
32% [■]	409/1261 [02:22<04:48, 2.95it/s]
33% [■]	410/1261 [02:23<04:48, 2.95it/s]
33% [■]	411/1261 [02:23<04:48, 2.94it/s]
33% [■]	412/1261 [02:23<04:50, 2.93it/s]
33% [■]	413/1261 [02:24<04:54, 2.88it/s]
33% [■]	414/1261 [02:24<04:54, 2.88it/s]
33% [■]	415/1261 [02:25<04:53, 2.88it/s]
33% [■]	416/1261 [02:25<04:47, 2.94it/s]
33% [■]	417/1261 [02:25<04:47, 2.94it/s]
33% [■]	418/1261 [02:26<04:47, 2.93it/s]
33% [■]	419/1261 [02:26<04:48, 2.91it/s]
33% [■]	420/1261 [02:26<04:47, 2.93it/s]
33% [■]	421/1261 [02:27<04:48, 2.91it/s]
33% [■]	422/1261 [02:27<04:49, 2.90it/s]
34% [■]	423/1261 [02:27<04:48, 2.91it/s]
34% [■]	424/1261 [02:28<04:47, 2.91it/s]
34% [■]	425/1261 [02:28<04:44, 2.93it/s]
34% [■]	426/1261 [02:28<04:45, 2.93it/s]

34% [■]	427/1261 [02:29<04:46, 2.92it/s]
34% [■]	428/1261 [02:29<04:44, 2.93it/s]
34% [■]	429/1261 [02:29<04:45, 2.91it/s]
34% [■]	430/1261 [02:30<04:44, 2.92it/s]
34% [■]	431/1261 [02:30<04:43, 2.93it/s]
34% [■]	432/1261 [02:30<04:45, 2.91it/s]
34% [■]	433/1261 [02:31<04:42, 2.93it/s]
34% [■]	434/1261 [02:31<04:39, 2.96it/s]
34% [■]	435/1261 [02:31<04:38, 2.96it/s]
35% [■]	436/1261 [02:32<04:37, 2.98it/s]
35% [■]	437/1261 [02:32<04:38, 2.96it/s]
35% [■]	438/1261 [02:32<04:41, 2.93it/s]
35% [■]	439/1261 [02:33<04:40, 2.93it/s]
35% [■]	440/1261 [02:33<04:37, 2.96it/s]
35% [■]	441/1261 [02:33<04:37, 2.96it/s]
35% [■]	442/1261 [02:34<04:40, 2.92it/s]
35% [■]	443/1261 [02:34<04:40, 2.92it/s]
35% [■]	444/1261 [02:34<04:38, 2.94it/s]
35% [■]	445/1261 [02:35<04:40, 2.91it/s]
35% [■]	446/1261 [02:35<04:38, 2.93it/s]
35% [■]	447/1261 [02:35<04:38, 2.92it/s]
36% [■]	448/1261 [02:36<04:41, 2.89it/s]
36% [■]	449/1261 [02:36<04:37, 2.92it/s]
36% [■]	450/1261 [02:36<04:39, 2.90it/s]
36% [■]	451/1261 [02:37<04:37, 2.92it/s]
36% [■]	452/1261 [02:37<04:37, 2.91it/s]
36% [■]	453/1261 [02:37<04:36, 2.92it/s]
36% [■]	454/1261 [02:38<04:35, 2.92it/s]
36% [■]	455/1261 [02:38<04:37, 2.91it/s]

36% [■]	456/1261 [02:38<04:34, 2.93it/s]
36% [■]	457/1261 [02:39<04:35, 2.91it/s]
36% [■]	458/1261 [02:39<04:38, 2.88it/s]
36% [■]	459/1261 [02:40<04:37, 2.89it/s]
36% [■]	460/1261 [02:40<04:34, 2.92it/s]
37% [■]	461/1261 [02:40<04:36, 2.90it/s]
37% [■]	462/1261 [02:41<04:34, 2.91it/s]
37% [■]	463/1261 [02:41<04:33, 2.92it/s]
37% [■]	464/1261 [02:41<04:32, 2.92it/s]
37% [■]	465/1261 [02:42<04:35, 2.89it/s]
37% [■]	466/1261 [02:42<04:32, 2.91it/s]
37% [■]	467/1261 [02:42<04:33, 2.90it/s]
37% [■]	468/1261 [02:43<04:33, 2.90it/s]
37% [■]	469/1261 [02:43<04:34, 2.89it/s]
37% [■]	470/1261 [02:43<04:30, 2.92it/s]
37% [■]	471/1261 [02:44<04:28, 2.95it/s]
37% [■]	472/1261 [02:44<04:29, 2.93it/s]
38% [■]	473/1261 [02:44<04:30, 2.91it/s]
38% [■]	474/1261 [02:45<04:30, 2.91it/s]
38% [■]	475/1261 [02:45<04:28, 2.93it/s]
38% [■]	476/1261 [02:45<04:29, 2.91it/s]
38% [■]	477/1261 [02:46<04:26, 2.94it/s]
38% [■]	478/1261 [02:46<04:24, 2.96it/s]
38% [■]	479/1261 [02:46<04:21, 2.99it/s]
38% [■]	480/1261 [02:47<04:24, 2.95it/s]
38% [■]	481/1261 [02:47<04:24, 2.95it/s]
38% [■]	482/1261 [02:47<04:24, 2.94it/s]
38% [■]	483/1261 [02:48<04:28, 2.89it/s]

38% [██████]	484/1261 [02:48<04:28, 2.90it/s]
38% [██████]	485/1261 [02:48<04:31, 2.86it/s]
39% [██████]	486/1261 [02:49<04:26, 2.91it/s]
39% [██████]	487/1261 [02:49<04:24, 2.93it/s]
39% [██████]	488/1261 [02:49<04:22, 2.94it/s]
39% [██████]	489/1261 [02:50<04:22, 2.94it/s]
39% [██████]	490/1261 [02:50<04:25, 2.90it/s]
39% [██████]	491/1261 [02:51<04:24, 2.91it/s]
39% [██████]	492/1261 [02:51<04:24, 2.90it/s]
39% [██████]	493/1261 [02:51<04:24, 2.90it/s]
39% [██████]	494/1261 [02:52<04:24, 2.90it/s]
39% [██████]	495/1261 [02:52<04:22, 2.92it/s]
39% [██████]	496/1261 [02:52<04:21, 2.93it/s]
39% [██████]	497/1261 [02:53<04:21, 2.92it/s]
39% [██████]	498/1261 [02:53<04:20, 2.93it/s]
40% [██████]	499/1261 [02:53<04:19, 2.94it/s]
40% [██████]	500/1261 [02:54<04:21, 2.91it/s]
40% [██████]	501/1261 [02:54<04:20, 2.92it/s]
40% [██████]	502/1261 [02:54<04:20, 2.91it/s]
40% [██████]	503/1261 [02:55<04:22, 2.89it/s]
40% [██████]	504/1261 [02:55<04:21, 2.90it/s]
40% [██████]	505/1261 [02:55<04:19, 2.92it/s]
40% [██████]	506/1261 [02:56<04:17, 2.94it/s]
40% [██████]	507/1261 [02:56<04:17, 2.92it/s]
40% [██████]	508/1261 [02:56<04:16, 2.93it/s]
40% [██████]	509/1261 [02:57<04:19, 2.89it/s]
40% [██████]	510/1261 [02:57<04:19, 2.90it/s]
41% [██████]	511/1261 [02:57<04:16, 2.92it/s]
41% [██████]	512/1261 [02:58<04:16, 2.92it/s]

41% | [REDACTED] | 513/1261 [02:58<04:17, 2.91it/s]
41% | [REDACTED] | 514/1261 [02:58<04:15, 2.93it/s]
41% | [REDACTED] | 515/1261 [02:59<04:17, 2.90it/s]
41% | [REDACTED] | 516/1261 [02:59<04:18, 2.88it/s]
41% | [REDACTED] | 517/1261 [02:59<04:17, 2.89it/s]
41% | [REDACTED] | 518/1261 [03:00<04:16, 2.90it/s]
41% | [REDACTED] | 519/1261 [03:00<04:17, 2.89it/s]
41% | [REDACTED] | 520/1261 [03:00<04:16, 2.89it/s]
41% | [REDACTED] | 521/1261 [03:01<04:13, 2.92it/s]
41% | [REDACTED] | 522/1261 [03:01<04:10, 2.95it/s]
41% | [REDACTED] | 523/1261 [03:01<04:13, 2.91it/s]
42% | [REDACTED] | 524/1261 [03:02<04:13, 2.91it/s]
42% | [REDACTED] | 525/1261 [03:02<04:12, 2.92it/s]
42% | [REDACTED] | 526/1261 [03:03<04:11, 2.92it/s]
42% | [REDACTED] | 527/1261 [03:03<04:13, 2.89it/s]
42% | [REDACTED] | 528/1261 [03:03<04:12, 2.90it/s]
42% | [REDACTED] | 529/1261 [03:04<04:08, 2.95it/s]
42% | [REDACTED] | 530/1261 [03:04<04:08, 2.94it/s]
42% | [REDACTED] | 531/1261 [03:04<04:09, 2.92it/s]
42% | [REDACTED] | 532/1261 [03:05<04:11, 2.90it/s]
42% | [REDACTED] | 533/1261 [03:05<04:08, 2.93it/s]
42% | [REDACTED] | 534/1261 [03:05<04:08, 2.93it/s]
42% | [REDACTED] | 535/1261 [03:06<04:08, 2.92it/s]
43% | [REDACTED] | 536/1261 [03:06<04:10, 2.89it/s]
43% | [REDACTED] | 537/1261 [03:06<04:06, 2.93it/s]
43% | [REDACTED] | 538/1261 [03:07<04:05, 2.95it/s]
43% | [REDACTED] | 539/1261 [03:07<04:07, 2.91it/s]
43% | [REDACTED] | 540/1261 [03:07<04:06, 2.93it/s]

43% [REDACTED]	541/1261 [03:08<04:09, 2.89it/s]
43% [REDACTED]	542/1261 [03:08<04:09, 2.88it/s]
43% [REDACTED]	543/1261 [03:08<04:09, 2.88it/s]
43% [REDACTED]	544/1261 [03:09<04:07, 2.90it/s]
43% [REDACTED]	545/1261 [03:09<04:04, 2.92it/s]
43% [REDACTED]	546/1261 [03:09<04:03, 2.93it/s]
43% [REDACTED]	547/1261 [03:10<04:03, 2.93it/s]
43% [REDACTED]	548/1261 [03:10<04:03, 2.92it/s]
44% [REDACTED]	549/1261 [03:10<04:03, 2.93it/s]
44% [REDACTED]	550/1261 [03:11<04:02, 2.93it/s]
44% [REDACTED]	551/1261 [03:11<04:01, 2.94it/s]
44% [REDACTED]	552/1261 [03:11<04:01, 2.93it/s]
44% [REDACTED]	553/1261 [03:12<04:03, 2.91it/s]
44% [REDACTED]	554/1261 [03:12<04:05, 2.88it/s]
44% [REDACTED]	555/1261 [03:12<04:02, 2.92it/s]
44% [REDACTED]	556/1261 [03:13<04:02, 2.91it/s]
44% [REDACTED]	557/1261 [03:13<04:05, 2.86it/s]
44% [REDACTED]	558/1261 [03:14<04:06, 2.85it/s]
44% [REDACTED]	559/1261 [03:14<04:06, 2.85it/s]
44% [REDACTED]	560/1261 [03:14<04:04, 2.87it/s]
44% [REDACTED]	561/1261 [03:15<04:04, 2.87it/s]
45% [REDACTED]	562/1261 [03:15<04:01, 2.90it/s]
45% [REDACTED]	563/1261 [03:15<03:58, 2.93it/s]
45% [REDACTED]	564/1261 [03:16<03:54, 2.97it/s]
45% [REDACTED]	565/1261 [03:16<03:56, 2.94it/s]
45% [REDACTED]	566/1261 [03:16<04:00, 2.89it/s]
45% [REDACTED]	567/1261 [03:17<03:58, 2.91it/s]
45% [REDACTED]	568/1261 [03:17<03:58, 2.90it/s]
45% [REDACTED]	569/1261 [03:17<03:58, 2.90it/s]

45%|██████ | 570/1261 [03:18<03:58, 2.90it/s]
45%|██████ | 571/1261 [03:18<03:56, 2.91it/s]
45%|██████ | 572/1261 [03:18<03:55, 2.93it/s]
45%|██████ | 573/1261 [03:19<03:55, 2.92it/s]
46%|██████ | 574/1261 [03:19<03:55, 2.91it/s]
46%|██████ | 575/1261 [03:19<03:57, 2.89it/s]
46%|██████ | 576/1261 [03:20<03:56, 2.90it/s]
46%|██████ | 577/1261 [03:20<03:57, 2.88it/s]
46%|██████ | 578/1261 [03:20<03:51, 2.94it/s]
46%|██████ | 579/1261 [03:21<03:55, 2.90it/s]
46%|██████ | 580/1261 [03:21<03:51, 2.94it/s]
46%|██████ | 581/1261 [03:21<03:53, 2.91it/s]
46%|██████ | 582/1261 [03:22<03:52, 2.92it/s]
46%|██████ | 583/1261 [03:22<03:53, 2.90it/s]
46%|██████ | 584/1261 [03:22<03:51, 2.92it/s]
46%|██████ | 585/1261 [03:23<03:48, 2.95it/s]
46%|██████ | 586/1261 [03:23<03:47, 2.97it/s]
47%|██████ | 587/1261 [03:23<03:50, 2.93it/s]
47%|██████ | 588/1261 [03:24<03:49, 2.93it/s]
47%|██████ | 589/1261 [03:24<03:46, 2.96it/s]
47%|██████ | 590/1261 [03:24<03:50, 2.92it/s]
47%|██████ | 591/1261 [03:25<03:51, 2.89it/s]
47%|██████ | 592/1261 [03:25<03:51, 2.89it/s]
47%|██████ | 593/1261 [03:26<03:50, 2.90it/s]
47%|██████ | 594/1261 [03:26<03:49, 2.91it/s]
47%|██████ | 595/1261 [03:26<03:46, 2.94it/s]
47%|██████ | 596/1261 [03:27<03:48, 2.91it/s]
47%|██████ | 597/1261 [03:27<03:50, 2.89it/s]

47% [REDACTED]	598/1261 [03:27<03:47, 2.91it/s]
48% [REDACTED]	599/1261 [03:28<03:48, 2.89it/s]
48% [REDACTED]	600/1261 [03:28<03:48, 2.89it/s]
48% [REDACTED]	601/1261 [03:28<03:48, 2.89it/s]
48% [REDACTED]	602/1261 [03:29<03:50, 2.86it/s]
48% [REDACTED]	603/1261 [03:29<03:49, 2.86it/s]
48% [REDACTED]	604/1261 [03:29<03:49, 2.87it/s]
48% [REDACTED]	605/1261 [03:30<03:48, 2.87it/s]
48% [REDACTED]	606/1261 [03:30<03:47, 2.88it/s]
48% [REDACTED]	607/1261 [03:30<03:46, 2.89it/s]
48% [REDACTED]	608/1261 [03:31<03:43, 2.92it/s]
48% [REDACTED]	609/1261 [03:31<03:43, 2.92it/s]
48% [REDACTED]	610/1261 [03:31<03:43, 2.91it/s]
48% [REDACTED]	611/1261 [03:32<03:42, 2.92it/s]
49% [REDACTED]	612/1261 [03:32<03:43, 2.90it/s]
49% [REDACTED]	613/1261 [03:32<03:42, 2.91it/s]
49% [REDACTED]	614/1261 [03:33<03:41, 2.92it/s]
49% [REDACTED]	615/1261 [03:33<03:45, 2.86it/s]
49% [REDACTED]	616/1261 [03:33<03:44, 2.88it/s]
49% [REDACTED]	617/1261 [03:34<03:43, 2.88it/s]
49% [REDACTED]	618/1261 [03:34<03:42, 2.89it/s]
49% [REDACTED]	619/1261 [03:35<03:41, 2.89it/s]
49% [REDACTED]	620/1261 [03:35<03:42, 2.89it/s]
49% [REDACTED]	621/1261 [03:35<03:39, 2.92it/s]
49% [REDACTED]	622/1261 [03:36<03:43, 2.86it/s]
49% [REDACTED]	623/1261 [03:36<03:41, 2.88it/s]
49% [REDACTED]	624/1261 [03:36<03:43, 2.85it/s]
50% [REDACTED]	625/1261 [03:37<03:39, 2.89it/s]
50% [REDACTED]	626/1261 [03:37<03:39, 2.89it/s]

50% [REDACTED]	627/1261 [03:37<03:38, 2.90it/s]
50% [REDACTED]	628/1261 [03:38<03:37, 2.91it/s]
50% [REDACTED]	629/1261 [03:38<03:34, 2.94it/s]
50% [REDACTED]	630/1261 [03:38<03:38, 2.89it/s]
50% [REDACTED]	631/1261 [03:39<03:38, 2.88it/s]
50% [REDACTED]	632/1261 [03:39<03:37, 2.90it/s]
50% [REDACTED]	633/1261 [03:39<03:36, 2.90it/s]
50% [REDACTED]	634/1261 [03:40<03:37, 2.88it/s]
50% [REDACTED]	635/1261 [03:40<03:37, 2.87it/s]
50% [REDACTED]	636/1261 [03:40<03:34, 2.91it/s]
51% [REDACTED]	637/1261 [03:41<03:34, 2.91it/s]
51% [REDACTED]	638/1261 [03:41<03:36, 2.88it/s]
51% [REDACTED]	639/1261 [03:41<03:36, 2.87it/s]
51% [REDACTED]	640/1261 [03:42<03:38, 2.85it/s]
51% [REDACTED]	641/1261 [03:42<03:36, 2.87it/s]
51% [REDACTED]	642/1261 [03:42<03:35, 2.88it/s]
51% [REDACTED]	643/1261 [03:43<03:37, 2.84it/s]
51% [REDACTED]	644/1261 [03:43<03:33, 2.89it/s]
51% [REDACTED]	645/1261 [03:44<03:34, 2.87it/s]
51% [REDACTED]	646/1261 [03:44<03:32, 2.90it/s]
51% [REDACTED]	647/1261 [03:44<03:31, 2.91it/s]
51% [REDACTED]	648/1261 [03:45<03:31, 2.89it/s]
51% [REDACTED]	649/1261 [03:45<03:29, 2.92it/s]
52% [REDACTED]	650/1261 [03:45<03:29, 2.92it/s]
52% [REDACTED]	651/1261 [03:46<03:31, 2.88it/s]
52% [REDACTED]	652/1261 [03:46<03:29, 2.90it/s]
52% [REDACTED]	653/1261 [03:46<03:28, 2.91it/s]
52% [REDACTED]	654/1261 [03:47<03:28, 2.92it/s]

52% ███████	655/1261 [03:47<03:28, 2.90it/s]
52% ███████	656/1261 [03:47<03:26, 2.93it/s]
52% ███████	657/1261 [03:48<03:29, 2.88it/s]
52% ███████	658/1261 [03:48<03:27, 2.90it/s]
52% ███████	659/1261 [03:48<03:26, 2.91it/s]
52% ███████	660/1261 [03:49<03:28, 2.89it/s]
52% ███████	661/1261 [03:49<03:25, 2.92it/s]
52% ███████	662/1261 [03:49<03:24, 2.93it/s]
53% ███████	663/1261 [03:50<03:25, 2.92it/s]
53% ███████	664/1261 [03:50<03:24, 2.92it/s]
53% ███████	665/1261 [03:50<03:23, 2.92it/s]
53% ███████	666/1261 [03:51<03:25, 2.90it/s]
53% ███████	667/1261 [03:51<03:26, 2.88it/s]
53% ███████	668/1261 [03:51<03:24, 2.90it/s]
53% ███████	669/1261 [03:52<03:23, 2.91it/s]
53% ███████	670/1261 [03:52<03:21, 2.93it/s]
53% ███████	671/1261 [03:52<03:23, 2.90it/s]
53% ███████	672/1261 [03:53<03:22, 2.91it/s]
53% ███████	673/1261 [03:53<03:22, 2.90it/s]
53% ███████	674/1261 [03:53<03:20, 2.93it/s]
54% ███████	675/1261 [03:54<03:18, 2.95it/s]
54% ███████	676/1261 [03:54<03:21, 2.90it/s]
54% ███████	677/1261 [03:55<03:20, 2.92it/s]
54% ███████	678/1261 [03:55<03:21, 2.89it/s]
54% ███████	679/1261 [03:55<03:20, 2.90it/s]
54% ███████	680/1261 [03:56<03:22, 2.87it/s]
54% ███████	681/1261 [03:56<03:19, 2.91it/s]
54% ███████	682/1261 [03:56<03:19, 2.90it/s]
54% ███████	683/1261 [03:57<03:17, 2.93it/s]

54%|██████ | 684/1261 [03:57<03:18, 2.91it/s]
54%|██████ | 685/1261 [03:57<03:17, 2.92it/s]
54%|██████ | 686/1261 [03:58<03:17, 2.91it/s]
54%|██████ | 687/1261 [03:58<03:16, 2.92it/s]
55%|██████ | 688/1261 [03:58<03:13, 2.97it/s]
55%|██████ | 689/1261 [03:59<03:11, 2.98it/s]
55%|██████ | 690/1261 [03:59<03:11, 2.98it/s]
55%|██████ | 691/1261 [03:59<03:12, 2.96it/s]
55%|██████ | 692/1261 [04:00<03:12, 2.95it/s]
55%|██████ | 693/1261 [04:00<03:13, 2.94it/s]
55%|██████ | 694/1261 [04:00<03:14, 2.92it/s]
55%|██████ | 695/1261 [04:01<03:12, 2.93it/s]
55%|██████ | 696/1261 [04:01<03:13, 2.92it/s]
55%|██████ | 697/1261 [04:01<03:12, 2.93it/s]
55%|██████ | 698/1261 [04:02<03:10, 2.95it/s]
55%|██████ | 699/1261 [04:02<03:12, 2.92it/s]
56%|██████ | 700/1261 [04:02<03:12, 2.92it/s]
56%|██████ | 701/1261 [04:03<03:13, 2.90it/s]
56%|██████ | 702/1261 [04:03<03:10, 2.94it/s]
56%|██████ | 703/1261 [04:03<03:10, 2.93it/s]
56%|██████ | 704/1261 [04:04<03:11, 2.91it/s]
56%|██████ | 705/1261 [04:04<03:10, 2.93it/s]
56%|██████ | 706/1261 [04:04<03:12, 2.89it/s]
56%|██████ | 707/1261 [04:05<03:11, 2.89it/s]
56%|██████ | 708/1261 [04:05<03:10, 2.91it/s]
56%|██████ | 709/1261 [04:05<03:08, 2.92it/s]
56%|██████ | 710/1261 [04:06<03:08, 2.92it/s]
56%|██████ | 711/1261 [04:06<03:09, 2.91it/s]

56% [REDACTED]	712/1261 [04:06<03:08, 2.91it/s]
57% [REDACTED]	713/1261 [04:07<03:09, 2.90it/s]
57% [REDACTED]	714/1261 [04:07<03:08, 2.90it/s]
57% [REDACTED]	715/1261 [04:08<03:09, 2.88it/s]
57% [REDACTED]	716/1261 [04:08<03:07, 2.90it/s]
57% [REDACTED]	717/1261 [04:08<03:07, 2.90it/s]
57% [REDACTED]	718/1261 [04:09<03:07, 2.90it/s]
57% [REDACTED]	719/1261 [04:09<03:06, 2.90it/s]
57% [REDACTED]	720/1261 [04:09<03:07, 2.88it/s]
57% [REDACTED]	721/1261 [04:10<03:05, 2.90it/s]
57% [REDACTED]	722/1261 [04:10<03:04, 2.92it/s]
57% [REDACTED]	723/1261 [04:10<03:04, 2.92it/s]
57% [REDACTED]	724/1261 [04:11<03:01, 2.96it/s]
57% [REDACTED]	725/1261 [04:11<03:00, 2.96it/s]
58% [REDACTED]	726/1261 [04:11<03:02, 2.92it/s]
58% [REDACTED]	727/1261 [04:12<03:04, 2.90it/s]
58% [REDACTED]	728/1261 [04:12<03:02, 2.92it/s]
58% [REDACTED]	729/1261 [04:12<03:00, 2.95it/s]
58% [REDACTED]	730/1261 [04:13<02:59, 2.96it/s]
58% [REDACTED]	731/1261 [04:13<02:59, 2.96it/s]
58% [REDACTED]	732/1261 [04:13<02:57, 2.98it/s]
58% [REDACTED]	733/1261 [04:14<03:00, 2.93it/s]
58% [REDACTED]	734/1261 [04:14<02:57, 2.97it/s]
58% [REDACTED]	735/1261 [04:14<02:57, 2.96it/s]
58% [REDACTED]	736/1261 [04:15<03:00, 2.91it/s]
58% [REDACTED]	737/1261 [04:15<02:58, 2.94it/s]
59% [REDACTED]	738/1261 [04:15<02:58, 2.93it/s]
59% [REDACTED]	739/1261 [04:16<02:57, 2.94it/s]
59% [REDACTED]	740/1261 [04:16<02:57, 2.94it/s]

59%|███████ | 741/1261 [04:16<02:56, 2.94it/s]
59%|███████ | 742/1261 [04:17<02:57, 2.93it/s]
59%|███████ | 743/1261 [04:17<02:54, 2.97it/s]
59%|███████ | 744/1261 [04:17<02:53, 2.98it/s]
59%|███████ | 745/1261 [04:18<02:56, 2.92it/s]
59%|███████ | 746/1261 [04:18<02:53, 2.96it/s]
59%|███████ | 747/1261 [04:18<02:55, 2.94it/s]
59%|███████ | 748/1261 [04:19<02:54, 2.94it/s]
59%|███████ | 749/1261 [04:19<02:52, 2.97it/s]
59%|███████ | 750/1261 [04:19<02:53, 2.95it/s]
60%|███████ | 751/1261 [04:20<02:52, 2.95it/s]
60%|███████ | 752/1261 [04:20<02:55, 2.91it/s]
60%|███████ | 753/1261 [04:20<02:53, 2.93it/s]
60%|███████ | 754/1261 [04:21<02:53, 2.92it/s]
60%|███████ | 755/1261 [04:21<02:53, 2.92it/s]
60%|███████ | 756/1261 [04:22<02:54, 2.89it/s]
60%|███████ | 757/1261 [04:22<02:54, 2.89it/s]
60%|███████ | 758/1261 [04:22<02:56, 2.86it/s]
60%|███████ | 759/1261 [04:23<02:55, 2.86it/s]
60%|███████ | 760/1261 [04:23<02:53, 2.89it/s]
60%|███████ | 761/1261 [04:23<02:52, 2.90it/s]
60%|███████ | 762/1261 [04:24<02:54, 2.86it/s]
61%|███████ | 763/1261 [04:24<02:53, 2.88it/s]
61%|███████ | 764/1261 [04:24<02:52, 2.88it/s]
61%|███████ | 765/1261 [04:25<02:56, 2.82it/s]
61%|███████ | 766/1261 [04:25<02:53, 2.85it/s]
61%|███████ | 767/1261 [04:25<02:51, 2.89it/s]
61%|███████ | 768/1261 [04:26<02:49, 2.91it/s]

61% ███████	769/1261 [04:26<02:49, 2.90it/s]
61% ███████	770/1261 [04:26<02:46, 2.94it/s]
61% ███████	771/1261 [04:27<02:48, 2.91it/s]
61% ███████	772/1261 [04:27<02:46, 2.93it/s]
61% ███████	773/1261 [04:27<02:47, 2.91it/s]
61% ███████	774/1261 [04:28<02:45, 2.94it/s]
61% ███████	775/1261 [04:28<02:45, 2.94it/s]
62% ███████	776/1261 [04:28<02:44, 2.94it/s]
62% ███████	777/1261 [04:29<02:43, 2.96it/s]
62% ███████	778/1261 [04:29<02:42, 2.97it/s]
62% ███████	779/1261 [04:29<02:42, 2.96it/s]
62% ███████	780/1261 [04:30<02:42, 2.97it/s]
62% ███████	781/1261 [04:30<02:43, 2.94it/s]
62% ███████	782/1261 [04:30<02:46, 2.88it/s]
62% ███████	783/1261 [04:31<02:45, 2.88it/s]
62% ███████	784/1261 [04:31<02:44, 2.90it/s]
62% ███████	785/1261 [04:31<02:43, 2.91it/s]
62% ███████	786/1261 [04:32<02:41, 2.94it/s]
62% ███████	787/1261 [04:32<02:40, 2.96it/s]
62% ███████	788/1261 [04:32<02:40, 2.94it/s]
63% ███████	789/1261 [04:33<02:42, 2.91it/s]
63% ███████	790/1261 [04:33<02:42, 2.89it/s]
63% ███████	791/1261 [04:34<02:41, 2.92it/s]
63% ███████	792/1261 [04:34<02:40, 2.93it/s]
63% ███████	793/1261 [04:34<02:40, 2.92it/s]
63% ███████	794/1261 [04:35<02:40, 2.92it/s]
63% ███████	795/1261 [04:35<02:39, 2.92it/s]
63% ███████	796/1261 [04:35<02:39, 2.91it/s]
63% ███████	797/1261 [04:36<02:38, 2.92it/s]

63%|███████ | 798/1261 [04:36<02:39, 2.91it/s]
63%|███████ | 799/1261 [04:36<02:41, 2.86it/s]
63%|███████ | 800/1261 [04:37<02:38, 2.92it/s]
64%|███████ | 801/1261 [04:37<02:37, 2.92it/s]
64%|███████ | 802/1261 [04:37<02:37, 2.92it/s]
64%|███████ | 803/1261 [04:38<02:36, 2.92it/s]
64%|███████ | 804/1261 [04:38<02:36, 2.92it/s]
64%|███████ | 805/1261 [04:38<02:35, 2.94it/s]
64%|███████ | 806/1261 [04:39<02:34, 2.95it/s]
64%|███████ | 807/1261 [04:39<02:34, 2.94it/s]
64%|███████ | 808/1261 [04:39<02:35, 2.92it/s]
64%|███████ | 809/1261 [04:40<02:33, 2.94it/s]
64%|███████ | 810/1261 [04:40<02:34, 2.92it/s]
64%|███████ | 811/1261 [04:40<02:32, 2.96it/s]
64%|███████ | 812/1261 [04:41<02:31, 2.97it/s]
64%|███████ | 813/1261 [04:41<02:33, 2.91it/s]
65%|███████ | 814/1261 [04:41<02:35, 2.88it/s]
65%|███████ | 815/1261 [04:42<02:35, 2.87it/s]
65%|███████ | 816/1261 [04:42<02:34, 2.89it/s]
65%|███████ | 817/1261 [04:42<02:33, 2.89it/s]
65%|███████ | 818/1261 [04:43<02:34, 2.88it/s]
65%|███████ | 819/1261 [04:43<02:33, 2.89it/s]
65%|███████ | 820/1261 [04:44<02:33, 2.87it/s]
65%|███████ | 821/1261 [04:44<02:32, 2.89it/s]
65%|███████ | 822/1261 [04:44<02:33, 2.87it/s]
65%|███████ | 823/1261 [04:45<02:31, 2.90it/s]
65%|███████ | 824/1261 [04:45<02:34, 2.84it/s]
65%|███████ | 825/1261 [04:45<02:33, 2.84it/s]

66% [REDACTED]	826/1261 [04:46<02:31, 2.86it/s]
66% [REDACTED]	827/1261 [04:46<02:33, 2.83it/s]
66% [REDACTED]	828/1261 [04:46<02:30, 2.87it/s]
66% [REDACTED]	829/1261 [04:47<02:29, 2.89it/s]
66% [REDACTED]	830/1261 [04:47<02:27, 2.92it/s]
66% [REDACTED]	831/1261 [04:47<02:27, 2.92it/s]
66% [REDACTED]	832/1261 [04:48<02:25, 2.96it/s]
66% [REDACTED]	833/1261 [04:48<02:26, 2.91it/s]
66% [REDACTED]	834/1261 [04:48<02:29, 2.86it/s]
66% [REDACTED]	835/1261 [04:49<02:27, 2.88it/s]
66% [REDACTED]	836/1261 [04:49<02:27, 2.89it/s]
66% [REDACTED]	837/1261 [04:49<02:28, 2.86it/s]
66% [REDACTED]	838/1261 [04:50<02:27, 2.86it/s]
67% [REDACTED]	839/1261 [04:50<02:27, 2.87it/s]
67% [REDACTED]	840/1261 [04:50<02:27, 2.85it/s]
67% [REDACTED]	841/1261 [04:51<02:28, 2.83it/s]
67% [REDACTED]	842/1261 [04:51<02:26, 2.85it/s]
67% [REDACTED]	843/1261 [04:52<02:28, 2.82it/s]
67% [REDACTED]	844/1261 [04:52<02:25, 2.86it/s]
67% [REDACTED]	845/1261 [04:52<02:24, 2.88it/s]
67% [REDACTED]	846/1261 [04:53<02:22, 2.92it/s]
67% [REDACTED]	847/1261 [04:53<02:22, 2.90it/s]
67% [REDACTED]	848/1261 [04:53<02:25, 2.84it/s]
67% [REDACTED]	849/1261 [04:54<02:23, 2.87it/s]
67% [REDACTED]	850/1261 [04:54<02:23, 2.87it/s]
67% [REDACTED]	851/1261 [04:54<02:22, 2.88it/s]
68% [REDACTED]	852/1261 [04:55<02:22, 2.88it/s]
68% [REDACTED]	853/1261 [04:55<02:22, 2.87it/s]
68% [REDACTED]	854/1261 [04:55<02:22, 2.86it/s]

68%|███████ | 855/1261 [04:56<02:20, 2.88it/s]
68%|███████ | 856/1261 [04:56<02:21, 2.86it/s]
68%|███████ | 857/1261 [04:56<02:20, 2.88it/s]
68%|███████ | 858/1261 [04:57<02:19, 2.89it/s]
68%|███████ | 859/1261 [04:57<02:19, 2.88it/s]
68%|███████ | 860/1261 [04:57<02:19, 2.87it/s]
68%|███████ | 861/1261 [04:58<02:18, 2.88it/s]
68%|███████ | 862/1261 [04:58<02:17, 2.90it/s]
68%|███████ | 863/1261 [04:58<02:18, 2.87it/s]
69%|███████ | 864/1261 [04:59<02:18, 2.86it/s]
69%|███████ | 865/1261 [04:59<02:18, 2.87it/s]
69%|███████ | 866/1261 [05:00<02:19, 2.83it/s]
69%|███████ | 867/1261 [05:00<02:17, 2.86it/s]
69%|███████ | 868/1261 [05:00<02:17, 2.85it/s]
69%|███████ | 869/1261 [05:01<02:17, 2.84it/s]
69%|███████ | 870/1261 [05:01<02:20, 2.78it/s]
69%|███████ | 871/1261 [05:01<02:20, 2.77it/s]
69%|███████ | 872/1261 [05:02<02:21, 2.75it/s]
69%|███████ | 873/1261 [05:02<02:18, 2.80it/s]
69%|███████ | 874/1261 [05:02<02:15, 2.85it/s]
69%|███████ | 875/1261 [05:03<02:12, 2.91it/s]
69%|███████ | 876/1261 [05:03<02:12, 2.91it/s]
70%|███████ | 877/1261 [05:03<02:11, 2.91it/s]
70%|███████ | 878/1261 [05:04<02:13, 2.86it/s]
70%|███████ | 879/1261 [05:04<02:12, 2.88it/s]
70%|███████ | 880/1261 [05:04<02:12, 2.87it/s]
70%|███████ | 881/1261 [05:05<02:11, 2.89it/s]
70%|███████ | 882/1261 [05:05<02:12, 2.86it/s]

70% ███████	883/1261 [05:05<02:12, 2.84it/s]
70% ███████	884/1261 [05:06<02:12, 2.85it/s]
70% ███████	885/1261 [05:06<02:15, 2.77it/s]
70% ███████	886/1261 [05:07<02:18, 2.71it/s]
70% ███████	887/1261 [05:07<02:16, 2.74it/s]
70% ███████	888/1261 [05:07<02:14, 2.77it/s]
70% ███████	889/1261 [05:08<02:11, 2.82it/s]
71% ███████	890/1261 [05:08<02:12, 2.80it/s]
71% ███████	891/1261 [05:08<02:11, 2.82it/s]
71% ███████	892/1261 [05:09<02:09, 2.84it/s]
71% ███████	893/1261 [05:09<02:08, 2.87it/s]
71% ███████	894/1261 [05:09<02:08, 2.86it/s]
71% ███████	895/1261 [05:10<02:08, 2.85it/s]
71% ███████	896/1261 [05:10<02:08, 2.85it/s]
71% ███████	897/1261 [05:10<02:07, 2.86it/s]
71% ███████	898/1261 [05:11<02:08, 2.83it/s]
71% ███████	899/1261 [05:11<02:05, 2.88it/s]
71% ███████	900/1261 [05:12<02:07, 2.83it/s]
71% ███████	901/1261 [05:12<02:08, 2.80it/s]
72% ███████	902/1261 [05:12<02:06, 2.84it/s]
72% ███████	903/1261 [05:13<02:05, 2.85it/s]
72% ███████	904/1261 [05:13<02:06, 2.81it/s]
72% ███████	905/1261 [05:13<02:06, 2.82it/s]
72% ███████	906/1261 [05:14<02:05, 2.84it/s]
72% ███████	907/1261 [05:14<02:04, 2.84it/s]
72% ███████	908/1261 [05:14<02:03, 2.85it/s]
72% ███████	909/1261 [05:15<02:03, 2.85it/s]
72% ███████	910/1261 [05:15<02:02, 2.86it/s]
72% ███████	911/1261 [05:15<02:02, 2.86it/s]

72%|███████ | 912/1261 [05:16<02:03, 2.84it/s]
72%|███████ | 913/1261 [05:16<02:02, 2.85it/s]
72%|███████ | 914/1261 [05:16<02:02, 2.83it/s]
73%|███████ | 915/1261 [05:17<02:03, 2.80it/s]
73%|███████ | 916/1261 [05:17<02:03, 2.80it/s]
73%|███████ | 917/1261 [05:18<02:01, 2.83it/s]
73%|███████ | 918/1261 [05:18<01:59, 2.86it/s]
73%|███████ | 919/1261 [05:18<02:01, 2.81it/s]
73%|███████ | 920/1261 [05:19<02:00, 2.82it/s]
73%|███████ | 921/1261 [05:19<02:00, 2.82it/s]
73%|███████ | 922/1261 [05:19<02:00, 2.80it/s]
73%|███████ | 923/1261 [05:20<02:01, 2.79it/s]
73%|███████ | 924/1261 [05:20<02:00, 2.79it/s]
73%|███████ | 925/1261 [05:20<01:58, 2.83it/s]
73%|███████ | 926/1261 [05:21<01:56, 2.87it/s]
74%|███████ | 927/1261 [05:21<01:55, 2.89it/s]
74%|███████ | 928/1261 [05:21<01:54, 2.91it/s]
74%|███████ | 929/1261 [05:22<01:54, 2.90it/s]
74%|███████ | 930/1261 [05:22<01:53, 2.91it/s]
74%|███████ | 931/1261 [05:22<01:53, 2.90it/s]
74%|███████ | 932/1261 [05:23<01:53, 2.91it/s]
74%|███████ | 933/1261 [05:23<01:53, 2.88it/s]
74%|███████ | 934/1261 [05:23<01:52, 2.91it/s]
74%|███████ | 935/1261 [05:24<01:51, 2.93it/s]
74%|███████ | 936/1261 [05:24<01:51, 2.93it/s]
74%|███████ | 937/1261 [05:24<01:51, 2.90it/s]
74%|███████ | 938/1261 [05:25<01:50, 2.92it/s]
74%|███████ | 939/1261 [05:25<01:50, 2.91it/s]

75% ███████	940/1261 [05:26<01:50, 2.90it/s]
75% ███████	941/1261 [05:26<01:50, 2.90it/s]
75% ███████	942/1261 [05:26<01:50, 2.88it/s]
75% ███████	943/1261 [05:27<01:50, 2.87it/s]
75% ███████	944/1261 [05:27<01:51, 2.84it/s]
75% ███████	945/1261 [05:27<01:50, 2.85it/s]
75% ███████	946/1261 [05:28<01:50, 2.86it/s]
75% ███████	947/1261 [05:28<01:49, 2.87it/s]
75% ███████	948/1261 [05:28<01:48, 2.90it/s]
75% ███████	949/1261 [05:29<01:48, 2.86it/s]
75% ███████	950/1261 [05:29<01:49, 2.85it/s]
75% ███████	951/1261 [05:29<01:48, 2.85it/s]
75% ███████	952/1261 [05:30<01:48, 2.85it/s]
76% ███████	953/1261 [05:30<01:47, 2.86it/s]
76% ███████	954/1261 [05:30<01:47, 2.85it/s]
76% ███████	955/1261 [05:31<01:47, 2.84it/s]
76% ███████	956/1261 [05:31<01:47, 2.84it/s]
76% ███████	957/1261 [05:31<01:47, 2.82it/s]
76% ███████	958/1261 [05:32<01:46, 2.85it/s]
76% ███████	959/1261 [05:32<01:46, 2.83it/s]
76% ███████	960/1261 [05:33<01:45, 2.85it/s]
76% ███████	961/1261 [05:33<01:45, 2.85it/s]
76% ███████	962/1261 [05:33<01:44, 2.87it/s]
76% ███████	963/1261 [05:34<01:46, 2.79it/s]
76% ███████	964/1261 [05:34<01:47, 2.76it/s]
77% ███████	965/1261 [05:34<01:46, 2.78it/s]
77% ███████	966/1261 [05:35<01:44, 2.82it/s]
77% ███████	967/1261 [05:35<01:44, 2.81it/s]
77% ███████	968/1261 [05:35<01:44, 2.81it/s]

77%|██████████| 969/1261 [05:36<01:44, 2.79it/s]
77%|██████████| 970/1261 [05:36<01:46, 2.73it/s]
77%|██████████| 971/1261 [05:37<01:46, 2.73it/s]
77%|██████████| 972/1261 [05:37<01:47, 2.69it/s]
77%|██████████| 973/1261 [05:37<01:49, 2.63it/s]
77%|██████████| 974/1261 [05:38<01:51, 2.57it/s]
77%|██████████| 975/1261 [05:38<01:49, 2.61it/s]
77%|██████████| 976/1261 [05:38<01:50, 2.59it/s]
77%|██████████| 977/1261 [05:39<01:48, 2.61it/s]
78%|██████████| 978/1261 [05:39<01:50, 2.55it/s]
78%|██████████| 979/1261 [05:40<01:50, 2.54it/s]
78%|██████████| 980/1261 [05:40<01:45, 2.66it/s]
78%|██████████| 981/1261 [05:40<01:42, 2.72it/s]
78%|██████████| 982/1261 [05:41<01:42, 2.73it/s]
78%|██████████| 983/1261 [05:41<01:41, 2.75it/s]
78%|██████████| 984/1261 [05:41<01:38, 2.81it/s]
78%|██████████| 985/1261 [05:42<01:38, 2.80it/s]
78%|██████████| 986/1261 [05:42<01:37, 2.83it/s]
78%|██████████| 987/1261 [05:42<01:37, 2.82it/s]
78%|██████████| 988/1261 [05:43<01:35, 2.86it/s]
78%|██████████| 989/1261 [05:43<01:34, 2.88it/s]
79%|██████████| 990/1261 [05:43<01:34, 2.87it/s]
79%|██████████| 991/1261 [05:44<01:33, 2.87it/s]
79%|██████████| 992/1261 [05:44<01:33, 2.86it/s]
79%|██████████| 993/1261 [05:45<01:37, 2.76it/s]
79%|██████████| 994/1261 [05:45<01:37, 2.75it/s]
79%|██████████| 995/1261 [05:45<01:37, 2.74it/s]
79%|██████████| 996/1261 [05:46<01:36, 2.75it/s]

79% ███████	997/1261 [05:46<01:34, 2.78it/s]
79% ███████	998/1261 [05:46<01:34, 2.80it/s]
79% ███████	999/1261 [05:47<01:32, 2.83it/s]
79% ███████	1000/1261 [05:47<01:31, 2.85it/s]
79% ███████	1001/1261 [05:47<01:30, 2.87it/s]
79% ███████	1002/1261 [05:48<01:30, 2.87it/s]
80% ███████	1003/1261 [05:48<01:29, 2.88it/s]
80% ███████	1004/1261 [05:48<01:29, 2.86it/s]
80% ███████	1005/1261 [05:49<01:29, 2.86it/s]
80% ███████	1006/1261 [05:49<01:31, 2.79it/s]
80% ███████	1007/1261 [05:50<01:30, 2.80it/s]
80% ███████	1008/1261 [05:50<01:28, 2.85it/s]
80% ███████	1009/1261 [05:50<01:29, 2.83it/s]
80% ███████	1010/1261 [05:51<01:29, 2.80it/s]
80% ███████	1011/1261 [05:51<01:31, 2.74it/s]
80% ███████	1012/1261 [05:51<01:31, 2.73it/s]
80% ███████	1013/1261 [05:52<01:32, 2.69it/s]
80% ███████	1014/1261 [05:52<01:32, 2.68it/s]
80% ███████	1015/1261 [05:52<01:32, 2.67it/s]
81% ███████	1016/1261 [05:53<01:32, 2.65it/s]
81% ███████	1017/1261 [05:53<01:30, 2.70it/s]
81% ███████	1018/1261 [05:54<01:30, 2.69it/s]
81% ███████	1019/1261 [05:54<01:30, 2.68it/s]
81% ███████	1020/1261 [05:54<01:28, 2.72it/s]
81% ███████	1021/1261 [05:55<01:28, 2.71it/s]
81% ███████	1022/1261 [05:55<01:28, 2.70it/s]
81% ███████	1023/1261 [05:55<01:26, 2.74it/s]
81% ███████	1024/1261 [05:56<01:27, 2.70it/s]
81% ███████	1025/1261 [05:56<01:28, 2.66it/s]

81%|███████ | 1026/1261 [05:57<01:30, 2.59it/s]
81%|███████ | 1027/1261 [05:57<01:29, 2.60it/s]
82%|███████ | 1028/1261 [05:57<01:28, 2.65it/s]
82%|███████ | 1029/1261 [05:58<01:28, 2.63it/s]
82%|███████ | 1030/1261 [05:58<01:29, 2.57it/s]
82%|███████ | 1031/1261 [05:59<01:29, 2.57it/s]
82%|███████ | 1032/1261 [05:59<01:27, 2.62it/s]
82%|███████ | 1033/1261 [05:59<01:26, 2.65it/s]
82%|███████ | 1034/1261 [06:00<01:25, 2.66it/s]
82%|███████ | 1035/1261 [06:00<01:23, 2.71it/s]
82%|███████ | 1036/1261 [06:00<01:22, 2.73it/s]
82%|███████ | 1037/1261 [06:01<01:21, 2.73it/s]
82%|███████ | 1038/1261 [06:01<01:22, 2.70it/s]
82%|███████ | 1039/1261 [06:01<01:22, 2.69it/s]
82%|███████ | 1040/1261 [06:02<01:21, 2.72it/s]
83%|███████ | 1041/1261 [06:02<01:19, 2.76it/s]
83%|███████ | 1042/1261 [06:03<01:18, 2.77it/s]
83%|███████ | 1043/1261 [06:03<01:18, 2.79it/s]
83%|███████ | 1044/1261 [06:03<01:18, 2.78it/s]
83%|███████ | 1045/1261 [06:04<01:17, 2.79it/s]
83%|███████ | 1046/1261 [06:04<01:15, 2.83it/s]
83%|███████ | 1047/1261 [06:04<01:16, 2.81it/s]
83%|███████ | 1048/1261 [06:05<01:15, 2.81it/s]
83%|███████ | 1049/1261 [06:05<01:15, 2.80it/s]
83%|███████ | 1050/1261 [06:05<01:17, 2.73it/s]
83%|███████ | 1051/1261 [06:06<01:17, 2.72it/s]
83%|███████ | 1052/1261 [06:06<01:16, 2.72it/s]
84%|███████ | 1053/1261 [06:07<01:16, 2.72it/s]

84% [REDACTED]	1054/1261 [06:07<01:15, 2.73it/s]
84% [REDACTED]	1055/1261 [06:07<01:14, 2.75it/s]
84% [REDACTED]	1056/1261 [06:08<01:13, 2.78it/s]
84% [REDACTED]	1057/1261 [06:08<01:14, 2.75it/s]
84% [REDACTED]	1058/1261 [06:08<01:13, 2.78it/s]
84% [REDACTED]	1059/1261 [06:09<01:13, 2.76it/s]
84% [REDACTED]	1060/1261 [06:09<01:13, 2.75it/s]
84% [REDACTED]	1061/1261 [06:09<01:12, 2.75it/s]
84% [REDACTED]	1062/1261 [06:10<01:12, 2.75it/s]
84% [REDACTED]	1063/1261 [06:10<01:11, 2.77it/s]
84% [REDACTED]	1064/1261 [06:10<01:10, 2.78it/s]
84% [REDACTED]	1065/1261 [06:11<01:10, 2.78it/s]
85% [REDACTED]	1066/1261 [06:11<01:10, 2.76it/s]
85% [REDACTED]	1067/1261 [06:12<01:10, 2.76it/s]
85% [REDACTED]	1068/1261 [06:12<01:09, 2.76it/s]
85% [REDACTED]	1069/1261 [06:12<01:10, 2.71it/s]
85% [REDACTED]	1070/1261 [06:13<01:09, 2.73it/s]
85% [REDACTED]	1071/1261 [06:13<01:08, 2.78it/s]
85% [REDACTED]	1072/1261 [06:13<01:08, 2.75it/s]
85% [REDACTED]	1073/1261 [06:14<01:08, 2.75it/s]
85% [REDACTED]	1074/1261 [06:14<01:08, 2.73it/s]
85% [REDACTED]	1075/1261 [06:15<01:08, 2.71it/s]
85% [REDACTED]	1076/1261 [06:15<01:08, 2.72it/s]
85% [REDACTED]	1077/1261 [06:15<01:07, 2.71it/s]
85% [REDACTED]	1078/1261 [06:16<01:06, 2.74it/s]
86% [REDACTED]	1079/1261 [06:16<01:07, 2.70it/s]
86% [REDACTED]	1080/1261 [06:16<01:07, 2.66it/s]
86% [REDACTED]	1081/1261 [06:17<01:07, 2.67it/s]
86% [REDACTED]	1082/1261 [06:17<01:06, 2.68it/s]

86%|██████████| 1083/1261 [06:17<01:06, 2.69it/s]
86%|██████████| 1084/1261 [06:18<01:05, 2.72it/s]
86%|██████████| 1085/1261 [06:18<01:04, 2.72it/s]
86%|██████████| 1086/1261 [06:19<01:04, 2.70it/s]
86%|██████████| 1087/1261 [06:19<01:04, 2.68it/s]
86%|██████████| 1088/1261 [06:19<01:03, 2.72it/s]
86%|██████████| 1089/1261 [06:20<01:03, 2.73it/s]
86%|██████████| 1090/1261 [06:20<01:03, 2.69it/s]
87%|██████████| 1091/1261 [06:20<01:03, 2.67it/s]
87%|██████████| 1092/1261 [06:21<01:02, 2.72it/s]
87%|██████████| 1093/1261 [06:21<01:01, 2.75it/s]
87%|██████████| 1094/1261 [06:22<01:00, 2.76it/s]
87%|██████████| 1095/1261 [06:22<01:00, 2.76it/s]
87%|██████████| 1096/1261 [06:22<00:59, 2.75it/s]
87%|██████████| 1097/1261 [06:23<00:59, 2.76it/s]
87%|██████████| 1098/1261 [06:23<00:59, 2.76it/s]
87%|██████████| 1099/1261 [06:23<00:58, 2.77it/s]
87%|██████████| 1100/1261 [06:24<00:57, 2.79it/s]
87%|██████████| 1101/1261 [06:24<00:57, 2.77it/s]
87%|██████████| 1102/1261 [06:24<00:57, 2.77it/s]
87%|██████████| 1103/1261 [06:25<00:57, 2.74it/s]
88%|██████████| 1104/1261 [06:25<00:57, 2.75it/s]
88%|██████████| 1105/1261 [06:25<00:56, 2.77it/s]
88%|██████████| 1106/1261 [06:26<00:55, 2.77it/s]
88%|██████████| 1107/1261 [06:26<00:56, 2.75it/s]
88%|██████████| 1108/1261 [06:27<00:55, 2.74it/s]
88%|██████████| 1109/1261 [06:27<00:56, 2.69it/s]
88%|██████████| 1110/1261 [06:27<00:56, 2.67it/s]

88%|██████████| 1111/1261 [06:28<00:56, 2.67it/s]
88%|██████████| 1112/1261 [06:28<00:54, 2.74it/s]
88%|██████████| 1113/1261 [06:28<00:52, 2.79it/s]
88%|██████████| 1114/1261 [06:29<00:52, 2.82it/s]
88%|██████████| 1115/1261 [06:29<00:52, 2.79it/s]
89%|██████████| 1116/1261 [06:29<00:51, 2.81it/s]
89%|██████████| 1117/1261 [06:30<00:50, 2.84it/s]
89%|██████████| 1118/1261 [06:30<00:50, 2.85it/s]
89%|██████████| 1119/1261 [06:31<00:49, 2.85it/s]
89%|██████████| 1120/1261 [06:31<00:49, 2.84it/s]
89%|██████████| 1121/1261 [06:31<00:49, 2.85it/s]
89%|██████████| 1122/1261 [06:32<00:49, 2.78it/s]
89%|██████████| 1123/1261 [06:32<00:49, 2.81it/s]
89%|██████████| 1124/1261 [06:32<00:48, 2.81it/s]
89%|██████████| 1125/1261 [06:33<00:48, 2.81it/s]
89%|██████████| 1126/1261 [06:33<00:47, 2.82it/s]
89%|██████████| 1127/1261 [06:33<00:47, 2.82it/s]
89%|██████████| 1128/1261 [06:34<00:47, 2.81it/s]
90%|██████████| 1129/1261 [06:34<00:47, 2.78it/s]
90%|██████████| 1130/1261 [06:34<00:47, 2.79it/s]
90%|██████████| 1131/1261 [06:35<00:46, 2.80it/s]
90%|██████████| 1132/1261 [06:35<00:46, 2.80it/s]
90%|██████████| 1133/1261 [06:36<00:45, 2.81it/s]
90%|██████████| 1134/1261 [06:36<00:44, 2.83it/s]
90%|██████████| 1135/1261 [06:36<00:44, 2.85it/s]
90%|██████████| 1136/1261 [06:37<00:43, 2.85it/s]
90%|██████████| 1137/1261 [06:37<00:43, 2.84it/s]
90%|██████████| 1138/1261 [06:37<00:43, 2.86it/s]
90%|██████████| 1139/1261 [06:38<00:42, 2.87it/s]

90%|██████████| 1140/1261 [06:38<00:42, 2.87it/s]
90%|██████████| 1141/1261 [06:38<00:41, 2.86it/s]
91%|██████████| 1142/1261 [06:39<00:41, 2.86it/s]
91%|██████████| 1143/1261 [06:39<00:40, 2.88it/s]
91%|██████████| 1144/1261 [06:39<00:40, 2.88it/s]
91%|██████████| 1145/1261 [06:40<00:39, 2.92it/s]
91%|██████████| 1146/1261 [06:40<00:39, 2.91it/s]
91%|██████████| 1147/1261 [06:40<00:39, 2.92it/s]
91%|██████████| 1148/1261 [06:41<00:38, 2.93it/s]
91%|██████████| 1149/1261 [06:41<00:38, 2.89it/s]
91%|██████████| 1150/1261 [06:41<00:38, 2.90it/s]
91%|██████████| 1151/1261 [06:42<00:38, 2.88it/s]
91%|██████████| 1152/1261 [06:42<00:38, 2.86it/s]
91%|██████████| 1153/1261 [06:42<00:37, 2.90it/s]
92%|██████████| 1154/1261 [06:43<00:37, 2.87it/s]
92%|██████████| 1155/1261 [06:43<00:37, 2.79it/s]
92%|██████████| 1156/1261 [06:44<00:37, 2.78it/s]
92%|██████████| 1157/1261 [06:44<00:38, 2.72it/s]
92%|██████████| 1158/1261 [06:44<00:38, 2.66it/s]
92%|██████████| 1159/1261 [06:45<00:38, 2.64it/s]
92%|██████████| 1160/1261 [06:45<00:37, 2.66it/s]
92%|██████████| 1161/1261 [06:45<00:37, 2.67it/s]
92%|██████████| 1162/1261 [06:46<00:36, 2.70it/s]
92%|██████████| 1163/1261 [06:46<00:35, 2.75it/s]
92%|██████████| 1164/1261 [06:47<00:35, 2.76it/s]
92%|██████████| 1165/1261 [06:47<00:33, 2.83it/s]
92%|██████████| 1166/1261 [06:47<00:33, 2.86it/s]
93%|██████████| 1167/1261 [06:48<00:32, 2.88it/s]

93%|██████████| 1168/1261 [06:48<00:32, 2.84it/s]
93%|██████████| 1169/1261 [06:48<00:32, 2.83it/s]
93%|██████████| 1170/1261 [06:49<00:32, 2.81it/s]
93%|██████████| 1171/1261 [06:49<00:31, 2.83it/s]
93%|██████████| 1172/1261 [06:49<00:33, 2.67it/s]
93%|██████████| 1173/1261 [06:50<00:33, 2.62it/s]
93%|██████████| 1174/1261 [06:50<00:32, 2.64it/s]
93%|██████████| 1175/1261 [06:51<00:31, 2.73it/s]
93%|██████████| 1176/1261 [06:51<00:31, 2.73it/s]
93%|██████████| 1177/1261 [06:51<00:30, 2.74it/s]
93%|██████████| 1178/1261 [06:52<00:30, 2.75it/s]
93%|██████████| 1179/1261 [06:52<00:29, 2.74it/s]
94%|██████████| 1180/1261 [06:52<00:29, 2.74it/s]
94%|██████████| 1181/1261 [06:53<00:28, 2.77it/s]
94%|██████████| 1182/1261 [06:53<00:28, 2.77it/s]
94%|██████████| 1183/1261 [06:53<00:28, 2.77it/s]
94%|██████████| 1184/1261 [06:54<00:27, 2.79it/s]
94%|██████████| 1185/1261 [06:54<00:27, 2.76it/s]
94%|██████████| 1186/1261 [06:54<00:27, 2.76it/s]
94%|██████████| 1187/1261 [06:55<00:26, 2.82it/s]
94%|██████████| 1188/1261 [06:55<00:26, 2.81it/s]
94%|██████████| 1189/1261 [06:56<00:25, 2.80it/s]
94%|██████████| 1190/1261 [06:56<00:25, 2.78it/s]
94%|██████████| 1191/1261 [06:56<00:25, 2.78it/s]
95%|██████████| 1192/1261 [06:57<00:24, 2.77it/s]
95%|██████████| 1193/1261 [06:57<00:24, 2.80it/s]
95%|██████████| 1194/1261 [06:57<00:24, 2.79it/s]
95%|██████████| 1195/1261 [06:58<00:23, 2.81it/s]
95%|██████████| 1196/1261 [06:58<00:23, 2.81it/s]

95%|██████████| 1197/1261 [06:58<00:23, 2.75it/s]
95%|██████████| 1198/1261 [06:59<00:23, 2.73it/s]
95%|██████████| 1199/1261 [06:59<00:22, 2.73it/s]
95%|██████████| 1200/1261 [07:00<00:22, 2.73it/s]
95%|██████████| 1201/1261 [07:00<00:21, 2.76it/s]
95%|██████████| 1202/1261 [07:00<00:21, 2.78it/s]
95%|██████████| 1203/1261 [07:01<00:20, 2.77it/s]
95%|██████████| 1204/1261 [07:01<00:20, 2.80it/s]
96%|██████████| 1205/1261 [07:01<00:19, 2.84it/s]
96%|██████████| 1206/1261 [07:02<00:19, 2.87it/s]
96%|██████████| 1207/1261 [07:02<00:19, 2.84it/s]
96%|██████████| 1208/1261 [07:02<00:18, 2.87it/s]
96%|██████████| 1209/1261 [07:03<00:18, 2.85it/s]
96%|██████████| 1210/1261 [07:03<00:17, 2.86it/s]
96%|██████████| 1211/1261 [07:03<00:17, 2.89it/s]
96%|██████████| 1212/1261 [07:04<00:17, 2.86it/s]
96%|██████████| 1213/1261 [07:04<00:16, 2.84it/s]
96%|██████████| 1214/1261 [07:04<00:16, 2.83it/s]
96%|██████████| 1215/1261 [07:05<00:16, 2.84it/s]
96%|██████████| 1216/1261 [07:05<00:15, 2.82it/s]
97%|██████████| 1217/1261 [07:06<00:15, 2.81it/s]
97%|██████████| 1218/1261 [07:06<00:15, 2.80it/s]
97%|██████████| 1219/1261 [07:06<00:15, 2.79it/s]
97%|██████████| 1220/1261 [07:07<00:14, 2.78it/s]
97%|██████████| 1221/1261 [07:07<00:14, 2.80it/s]
97%|██████████| 1222/1261 [07:07<00:13, 2.81it/s]
97%|██████████| 1223/1261 [07:08<00:13, 2.86it/s]
97%|██████████| 1224/1261 [07:08<00:13, 2.83it/s]

97%|██████████| 1225/1261 [07:08<00:12, 2.81it/s]
97%|██████████| 1226/1261 [07:09<00:12, 2.82it/s]
97%|██████████| 1227/1261 [07:09<00:11, 2.86it/s]
97%|██████████| 1228/1261 [07:09<00:11, 2.90it/s]
97%|██████████| 1229/1261 [07:10<00:11, 2.91it/s]
98%|██████████| 1230/1261 [07:10<00:10, 2.91it/s]
98%|██████████| 1231/1261 [07:10<00:10, 2.92it/s]
98%|██████████| 1232/1261 [07:11<00:10, 2.89it/s]
98%|██████████| 1233/1261 [07:11<00:09, 2.87it/s]
98%|██████████| 1234/1261 [07:11<00:09, 2.88it/s]
98%|██████████| 1235/1261 [07:12<00:09, 2.88it/s]
98%|██████████| 1236/1261 [07:12<00:08, 2.85it/s]
98%|██████████| 1237/1261 [07:13<00:08, 2.83it/s]
98%|██████████| 1238/1261 [07:13<00:08, 2.80it/s]
98%|██████████| 1239/1261 [07:13<00:07, 2.77it/s]
98%|██████████| 1240/1261 [07:14<00:07, 2.80it/s]
98%|██████████| 1241/1261 [07:14<00:07, 2.77it/s]
98%|██████████| 1242/1261 [07:14<00:06, 2.82it/s]
99%|██████████| 1243/1261 [07:15<00:06, 2.83it/s]
99%|██████████| 1244/1261 [07:15<00:05, 2.87it/s]
99%|██████████| 1245/1261 [07:15<00:05, 2.87it/s]
99%|██████████| 1246/1261 [07:16<00:05, 2.87it/s]
99%|██████████| 1247/1261 [07:16<00:04, 2.89it/s]
99%|██████████| 1248/1261 [07:16<00:04, 2.85it/s]
99%|██████████| 1249/1261 [07:17<00:04, 2.86it/s]
99%|██████████| 1250/1261 [07:17<00:03, 2.82it/s]
99%|██████████| 1251/1261 [07:17<00:03, 2.81it/s]
99%|██████████| 1252/1261 [07:18<00:03, 2.83it/s]
99%|██████████| 1253/1261 [07:18<00:02, 2.87it/s]

```
99%|██████████| 1254/1261 [07:19<00:02, 2.87it/s]
100%|██████████| 1255/1261 [07:19<00:02, 2.84it/s]
100%|██████████| 1256/1261 [07:19<00:01, 2.86it/s]
100%|██████████| 1257/1261 [07:20<00:01, 2.88it/s]
100%|██████████| 1258/1261 [07:20<00:01, 2.89it/s]
100%|██████████| 1259/1261 [07:20<00:00, 2.85it/s]
100%|██████████| 1260/1261 [07:21<00:00, 2.86it/s]
```

```
[MoviePy] Done.  
[MoviePy] >>> Video ready: project_video_output.mp4
```

```
CPU times: user 15min 16s, sys: 1min 52s, total: 17min 9s  
Wall time: 7min 21s
```

```
In [ ]: clip_output = 'project_video_output.mp4'  
HTML("""  
<video width="960" height="540" controls>  
  <source src="{0}">  
</video>  
""".format(clip_output))
```

Challenge Video

In [150]: cnt=0

```

Parameters = {'CameraCalibrationFile': './cam_calib.p',
              's_thresh':(80, 255), #G
              'h_thresh':(42, 80), #B
              'sx_thresh':(20, 100), #R
              'Perspect_hx1': 584,
              'Perspect_hx2': 721,
              'Perspect_hy': 470, #the y of the horizon
              'Perspect_offset': 200,
              'ROI_hx1': 640,
              'ROI_hx2': 730,
              'ROI_bx1': 200,
              'ROI_bx2': 1100,
              'ROI_hy':470,
              'Fit_ClearOut': (500, 900),
              'Fit_MinPoints': 150,
              'Fit_MinCurvature': 100,
              'Fit_PositionTolerance': 150,
              'Fit_WidthTolerance': 100,
              'FitWindowSize': 10,
              'Fit_ValueThreshold': 0.02,
              'Fit_std': 0.05
            }

def equalizeHistColor(image):
    img_yuv = cv2.cvtColor(image, cv2.COLOR_BGR2YUV)
    # equalize the histogram of the Y channel
    img_yuv[:, :, 0] = cv2.equalizeHist(img_yuv[:, :, 0])
    # convert the YUV image back to RGB format
    image_out = cv2.cvtColor(img_yuv, cv2.COLOR_YUV2BGR)
    return image_out

def Pipeline_cv(image):
    global cnt
    #mpimg.imsave('challenge_video_input/frame_'+str(cnt).strip()+' .jpg', image, format='jpg')
    undist = CamUndistort(image)
    undist = equalizeHistColor(undist)
    thresholded = Thresholding(undist)
    roied = ROI(thresholded)
    warped, M = PerspectiveTransform(roied)
    TrackingLanes(warped, vis=False)
    out = DrawingLaneCarpet(warped, undist, M, vis=False)
    if out is None:
        out = undist
    mpimg.imsave('challenge_video_output/frame_'+str(cnt).strip()+' .jpg', out, format='jpg')
    cnt+=1
    return out

```

Parameter Tuning Part

```
In [154]: plt.figure(figsize=(16, 9))
LeftLine = Line(singleFrameMode=True)
RightLine = Line(singleFrameMode=True)
left_XS = []
right_XS = []
image = image = mpimg.imread('challenge_video_input/frame_265.jpg')
undist = CamUndistort(image)
equalized = equalizeHistColor(undist)
plt.imshow(equalized)
plt.show()

thresholded = Thresholding(equalized)
plt.imshow(thresholded)
plt.show()

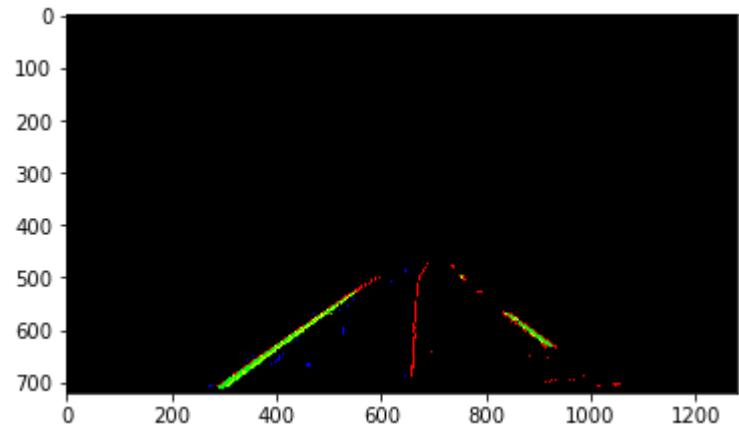
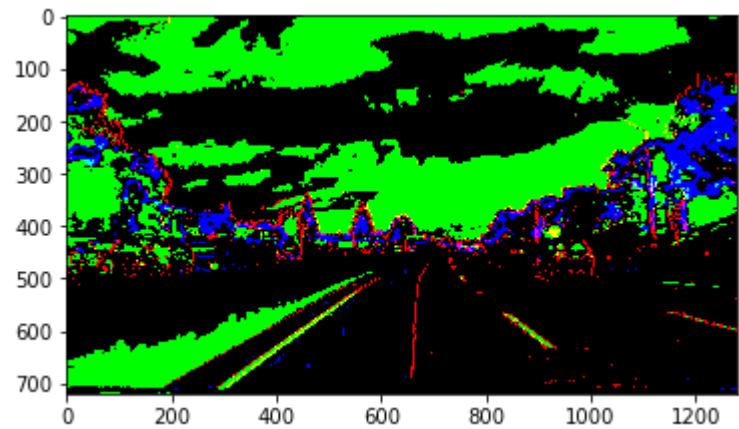
#mpimg.imsave('output_images/test1_th.jpg', thresholded, format='jpg')
roiед = ROI(thresholded)

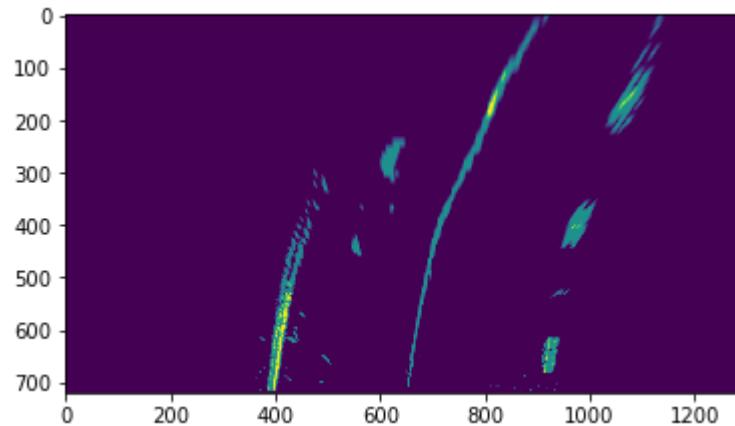
plt.imshow(roiед)
plt.show()

#mpimg.imsave('output_images/test1_roi.jpg', roiед, format='jpg')
warped, M = PerspectiveTransform(roiед)

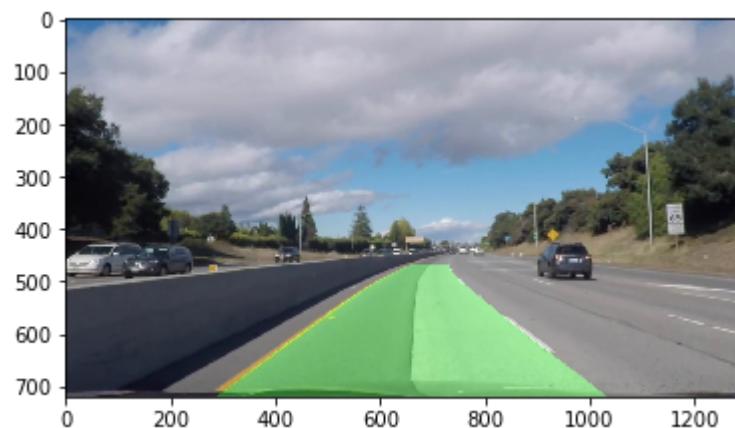
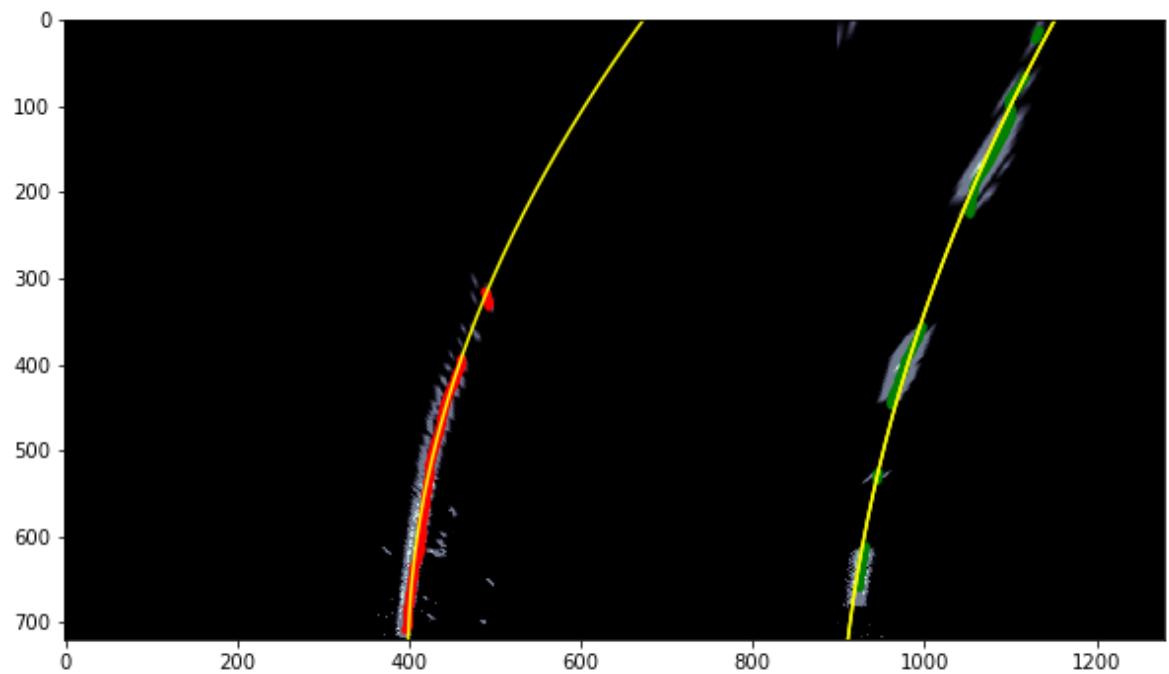
plt.imshow(warped)
plt.show()

#mpimg.imsave('output_images/test1_warped.jpg', warped, format='jpg')
TrackingLanes(warped, vis=True)
plt.show()
result = DrawingLaneCarpet(warped, undist, M, vis=True)
```





Estimated width (pixel): 530 Left Curvature: 256.698958801 m Right Curvature: 425.52437278 m



```
In [155]: clip_output = 'challenge_video_output.mp4'
clip2 = VideoFileClip("challenge_video.mp4")
LeftLine = Line(singleFrameMode=False)
RightLine = Line(singleFrameMode=False)
left_XS = []
right_XS = []
cnt=0
processor = clip2.fl_image(Pipeline_cv) #NOTE: this function expects color images!!
%time processor.write_videofile(clip_output, audio=False)
```

```
[MoviePy] >>> Building video challenge_video_output.mp4
[MoviePy] Writing video challenge_video_output.mp4
```

0%	0/485 [00:00<?, ?it/s]
0%	1/485 [00:00<03:51, 2.09it/s]
0%	2/485 [00:00<03:48, 2.11it/s]
1%	3/485 [00:01<03:46, 2.13it/s]
1%	4/485 [00:01<03:39, 2.19it/s]
1%	5/485 [00:02<03:41, 2.16it/s]
1%	6/485 [00:02<03:43, 2.14it/s]
1%	7/485 [00:03<03:40, 2.17it/s]
2%	8/485 [00:03<03:40, 2.17it/s]
2%	9/485 [00:04<03:37, 2.19it/s]
2%	10/485 [00:04<03:36, 2.19it/s]
2%	11/485 [00:05<03:42, 2.13it/s]
2%	12/485 [00:05<03:38, 2.16it/s]
3%	13/485 [00:05<03:33, 2.21it/s]
3%	14/485 [00:06<03:31, 2.22it/s]
3%	15/485 [00:06<03:35, 2.18it/s]
3%	16/485 [00:07<03:36, 2.17it/s]
4%	17/485 [00:07<03:35, 2.17it/s]
4%	18/485 [00:08<03:34, 2.18it/s]
4%	19/485 [00:08<03:40, 2.12it/s]
4%	20/485 [00:09<03:37, 2.14it/s]
4%	21/485 [00:09<03:38, 2.13it/s]
5%	22/485 [00:10<03:33, 2.17it/s]
5%	23/485 [00:10<03:37, 2.12it/s]
5%	24/485 [00:11<03:39, 2.10it/s]
5%	25/485 [00:11<03:39, 2.09it/s]
5%	26/485 [00:12<03:37, 2.11it/s]
6%	27/485 [00:12<03:41, 2.06it/s]

6% █	28/485 [00:13<03:44, 2.04it/s]
6% █	29/485 [00:13<03:47, 2.00it/s]
6% █	30/485 [00:14<03:47, 2.00it/s]
6% █	31/485 [00:14<03:45, 2.02it/s]
7% █	32/485 [00:15<03:41, 2.05it/s]
7% █	33/485 [00:15<03:37, 2.07it/s]
7% █	34/485 [00:15<03:33, 2.11it/s]
7% █	35/485 [00:16<03:37, 2.07it/s]
7% █	36/485 [00:17<03:43, 2.01it/s]
8% █	37/485 [00:17<03:51, 1.94it/s]
8% █	38/485 [00:18<03:47, 1.96it/s]
8% █	39/485 [00:18<03:49, 1.95it/s]
8% █	40/485 [00:19<03:47, 1.96it/s]
8% █	41/485 [00:19<03:45, 1.97it/s]
9% █	42/485 [00:20<03:41, 2.00it/s]
9% █	43/485 [00:20<03:45, 1.96it/s]
9% █	44/485 [00:21<03:39, 2.01it/s]
9% █	45/485 [00:21<03:37, 2.02it/s]
9% █	46/485 [00:22<03:38, 2.01it/s]
10% █	47/485 [00:22<03:37, 2.01it/s]
10% █	48/485 [00:23<03:34, 2.04it/s]
10% █	49/485 [00:23<03:35, 2.02it/s]
10% █	50/485 [00:24<03:33, 2.04it/s]
11% █	51/485 [00:24<03:30, 2.06it/s]
11% █	52/485 [00:24<03:27, 2.09it/s]
11% █	53/485 [00:25<03:20, 2.15it/s]
11% █	54/485 [00:25<03:10, 2.26it/s]
11% █	55/485 [00:26<03:04, 2.33it/s]
12% █	56/485 [00:26<02:58, 2.40it/s]

12% █	57/485 [00:26<02:56, 2.43it/s]
12% █	58/485 [00:27<02:54, 2.45it/s]
12% █	59/485 [00:27<02:55, 2.43it/s]
12% █	60/485 [00:28<02:52, 2.46it/s]
13% █	61/485 [00:28<02:52, 2.45it/s]
13% █	62/485 [00:29<02:53, 2.44it/s]
13% █	63/485 [00:29<02:56, 2.39it/s]
13% █	64/485 [00:29<02:54, 2.41it/s]
13% █	65/485 [00:30<02:55, 2.39it/s]
14% █	66/485 [00:30<02:54, 2.40it/s]
14% █	67/485 [00:31<02:53, 2.41it/s]
14% █	68/485 [00:31<02:50, 2.45it/s]
14% █	69/485 [00:31<02:51, 2.43it/s]
14% █	70/485 [00:32<02:49, 2.45it/s]
15% █	71/485 [00:32<02:52, 2.40it/s]
15% █	72/485 [00:33<02:54, 2.37it/s]
15% █	73/485 [00:33<03:00, 2.28it/s]
15% █	74/485 [00:34<02:59, 2.30it/s]
15% █	75/485 [00:34<02:59, 2.29it/s]
16% █	76/485 [00:34<02:54, 2.34it/s]
16% █	77/485 [00:35<02:54, 2.34it/s]
16% █	78/485 [00:35<02:53, 2.35it/s]
16% █	79/485 [00:36<02:50, 2.39it/s]
16% █	80/485 [00:36<02:46, 2.44it/s]
17% █	81/485 [00:37<02:46, 2.43it/s]
17% █	82/485 [00:37<02:43, 2.46it/s]
17% █	83/485 [00:37<02:43, 2.46it/s]
17% █	84/485 [00:38<02:42, 2.48it/s]

18% █	85/485 [00:38<02:46, 2.40it/s]
18% █	86/485 [00:39<02:42, 2.46it/s]
18% █	87/485 [00:39<02:42, 2.45it/s]
18% █	88/485 [00:39<02:43, 2.42it/s]
18% █	89/485 [00:40<02:45, 2.40it/s]
19% █	90/485 [00:40<02:43, 2.42it/s]
19% █	91/485 [00:41<02:43, 2.40it/s]
19% █	92/485 [00:41<02:45, 2.38it/s]
19% █	93/485 [00:41<02:44, 2.38it/s]
19% █	94/485 [00:42<02:44, 2.38it/s]
20% █	95/485 [00:42<02:44, 2.37it/s]
20% █	96/485 [00:43<02:42, 2.39it/s]
20% █	97/485 [00:43<02:46, 2.33it/s]
20% █	98/485 [00:44<02:42, 2.38it/s]
20% █	99/485 [00:44<02:41, 2.38it/s]
21% █	100/485 [00:44<02:38, 2.42it/s]
21% █	101/485 [00:45<02:36, 2.45it/s]
21% █	102/485 [00:45<02:37, 2.43it/s]
21% █	103/485 [00:46<02:40, 2.39it/s]
21% █	104/485 [00:46<02:36, 2.44it/s]
22% █	105/485 [00:46<02:35, 2.45it/s]
22% █	106/485 [00:47<02:36, 2.42it/s]
22% █	107/485 [00:47<02:38, 2.38it/s]
22% █	108/485 [00:48<02:40, 2.35it/s]
22% █	109/485 [00:48<02:43, 2.30it/s]
23% █	110/485 [00:49<02:42, 2.31it/s]
23% █	111/485 [00:49<02:45, 2.26it/s]
23% █	112/485 [00:50<02:44, 2.27it/s]
23% █	113/485 [00:50<02:39, 2.33it/s]

24% ██████	114/485 [00:50<02:39, 2.33it/s]
24% ██████	115/485 [00:51<02:39, 2.32it/s]
24% ██████	116/485 [00:51<02:50, 2.16it/s]
24% ██████	117/485 [00:52<02:44, 2.24it/s]
24% ██████	118/485 [00:52<02:42, 2.25it/s]
25% ██████	119/485 [00:53<02:38, 2.32it/s]
25% ██████	120/485 [00:53<02:36, 2.34it/s]
25% ██████	121/485 [00:53<02:36, 2.33it/s]
25% ██████	122/485 [00:54<02:37, 2.31it/s]
25% ██████	123/485 [00:54<02:35, 2.33it/s]
26% ██████	124/485 [00:55<02:37, 2.30it/s]
26% ██████	125/485 [00:55<02:36, 2.31it/s]
26% ██████	126/485 [00:56<02:37, 2.28it/s]
26% ██████	127/485 [00:56<02:42, 2.21it/s]
26% ██████	128/485 [00:57<02:42, 2.20it/s]
27% ██████	129/485 [00:57<02:35, 2.29it/s]
27% ██████	130/485 [00:57<02:31, 2.34it/s]
27% ██████	131/485 [00:58<02:28, 2.38it/s]
27% ██████	132/485 [00:58<02:29, 2.36it/s]
27% ██████	133/485 [00:59<02:29, 2.35it/s]
28% ██████	134/485 [00:59<02:33, 2.29it/s]
28% ██████	135/485 [01:00<02:31, 2.31it/s]
28% ██████	136/485 [01:00<02:32, 2.28it/s]
28% ██████	137/485 [01:00<02:29, 2.33it/s]
28% ██████	138/485 [01:01<02:28, 2.34it/s]
29% ██████	139/485 [01:01<02:31, 2.29it/s]
29% ██████	140/485 [01:02<02:29, 2.31it/s]
29% ██████	141/485 [01:02<02:26, 2.35it/s]

29% ███████	142/485 [01:03<02:25, 2.35it/s]
29% ███████	143/485 [01:03<02:25, 2.35it/s]
30% ███████	144/485 [01:03<02:25, 2.34it/s]
30% ███████	145/485 [01:04<02:23, 2.37it/s]
30% ███████	146/485 [01:04<02:29, 2.27it/s]
30% ███████	147/485 [01:05<02:27, 2.29it/s]
31% ███████	148/485 [01:05<02:30, 2.24it/s]
31% ███████	149/485 [01:06<02:32, 2.21it/s]
31% ███████	150/485 [01:06<02:30, 2.23it/s]
31% ███████	151/485 [01:06<02:25, 2.29it/s]
31% ███████	152/485 [01:07<02:23, 2.31it/s]
32% ███████	153/485 [01:07<02:25, 2.28it/s]
32% ███████	154/485 [01:08<02:23, 2.31it/s]
32% ███████	155/485 [01:08<02:25, 2.28it/s]
32% ███████	156/485 [01:09<02:23, 2.30it/s]
32% ███████	157/485 [01:09<02:22, 2.30it/s]
33% ███████	158/485 [01:10<02:21, 2.30it/s]
33% ███████	159/485 [01:10<02:23, 2.28it/s]
33% ███████	160/485 [01:10<02:23, 2.26it/s]
33% ███████	161/485 [01:11<02:29, 2.17it/s]
33% ███████	162/485 [01:11<02:26, 2.21it/s]
34% ███████	163/485 [01:12<02:24, 2.22it/s]
34% ███████	164/485 [01:12<02:28, 2.16it/s]
34% ███████	165/485 [01:13<02:27, 2.17it/s]
34% ███████	166/485 [01:13<02:29, 2.13it/s]
34% ███████	167/485 [01:14<02:25, 2.19it/s]
35% ███████	168/485 [01:14<02:25, 2.19it/s]
35% ███████	169/485 [01:15<02:28, 2.12it/s]
35% ███████	170/485 [01:15<02:29, 2.11it/s]

35% ██████	171/485 [01:16<02:29, 2.11it/s]
35% ██████	172/485 [01:16<02:26, 2.13it/s]
36% ██████	173/485 [01:16<02:23, 2.18it/s]
36% ██████	174/485 [01:17<02:21, 2.20it/s]
36% ██████	175/485 [01:17<02:22, 2.18it/s]
36% ██████	176/485 [01:18<02:16, 2.27it/s]
36% ██████	177/485 [01:18<02:16, 2.25it/s]
37% ██████	178/485 [01:19<02:15, 2.27it/s]
37% ██████	179/485 [01:19<02:11, 2.32it/s]
37% ██████	180/485 [01:20<02:11, 2.31it/s]
37% ██████	181/485 [01:20<02:11, 2.32it/s]
38% ██████	182/485 [01:20<02:11, 2.30it/s]
38% ██████	183/485 [01:21<02:13, 2.26it/s]
38% ██████	184/485 [01:21<02:08, 2.34it/s]
38% ██████	185/485 [01:22<02:11, 2.28it/s]
38% ██████	186/485 [01:22<02:13, 2.24it/s]
39% ██████	187/485 [01:23<02:12, 2.26it/s]
39% ██████	188/485 [01:23<02:12, 2.24it/s]
39% ██████	189/485 [01:23<02:11, 2.25it/s]
39% ██████	190/485 [01:24<02:10, 2.27it/s]
39% ██████	191/485 [01:24<02:07, 2.30it/s]
40% ██████	192/485 [01:25<02:08, 2.29it/s]
40% ██████	193/485 [01:25<02:06, 2.32it/s]
40% ██████	194/485 [01:26<02:05, 2.31it/s]
40% ██████	195/485 [01:26<02:04, 2.33it/s]
40% ██████	196/485 [01:26<02:03, 2.34it/s]
41% ██████	197/485 [01:27<02:04, 2.31it/s]
41% ██████	198/485 [01:27<02:04, 2.30it/s]

41% ███████	199/485 [01:28<02:02, 2.33it/s]
41% ███████	200/485 [01:28<02:05, 2.26it/s]
41% ███████	201/485 [01:29<02:03, 2.29it/s]
42% ███████	202/485 [01:29<02:06, 2.23it/s]
42% ███████	203/485 [01:30<02:07, 2.21it/s]
42% ███████	204/485 [01:30<02:07, 2.20it/s]
42% ███████	205/485 [01:31<02:06, 2.21it/s]
42% ███████	206/485 [01:31<02:05, 2.21it/s]
43% ███████	207/485 [01:31<02:02, 2.27it/s]
43% ███████	208/485 [01:32<02:02, 2.27it/s]
43% ███████	209/485 [01:32<02:02, 2.25it/s]
43% ███████	210/485 [01:33<02:00, 2.28it/s]
44% ███████	211/485 [01:33<02:02, 2.24it/s]
44% ███████	212/485 [01:34<02:02, 2.22it/s]
44% ███████	213/485 [01:34<02:03, 2.21it/s]
44% ███████	214/485 [01:35<01:58, 2.28it/s]
44% ███████	215/485 [01:35<01:58, 2.27it/s]
45% ███████	216/485 [01:35<01:55, 2.32it/s]
45% ███████	217/485 [01:36<01:55, 2.32it/s]
45% ███████	218/485 [01:36<01:59, 2.24it/s]
45% ███████	219/485 [01:37<01:58, 2.24it/s]
45% ███████	220/485 [01:37<01:54, 2.31it/s]
46% ███████	221/485 [01:38<01:51, 2.37it/s]
46% ███████	222/485 [01:38<01:50, 2.38it/s]
46% ███████	223/485 [01:38<01:49, 2.38it/s]
46% ███████	224/485 [01:39<01:49, 2.39it/s]
46% ███████	225/485 [01:39<01:51, 2.32it/s]
47% ███████	226/485 [01:40<01:51, 2.32it/s]
47% ███████	227/485 [01:40<01:52, 2.30it/s]

47% ███████	228/485 [01:41<01:50, 2.32it/s]
47% ███████	229/485 [01:41<01:50, 2.31it/s]
47% ███████	230/485 [01:41<01:48, 2.36it/s]
48% ███████	231/485 [01:42<01:44, 2.43it/s]
48% ███████	232/485 [01:42<01:46, 2.37it/s]
48% ███████	233/485 [01:43<01:48, 2.33it/s]
48% ███████	234/485 [01:43<01:48, 2.31it/s]
48% ███████	235/485 [01:44<01:47, 2.32it/s]
49% ███████	236/485 [01:44<01:45, 2.37it/s]
49% ███████	237/485 [01:44<01:44, 2.38it/s]
49% ███████	238/485 [01:45<01:43, 2.38it/s]
49% ███████	239/485 [01:45<01:48, 2.27it/s]
49% ███████	240/485 [01:46<01:48, 2.25it/s]
50% ███████	241/485 [01:46<01:49, 2.23it/s]
50% ███████	242/485 [01:47<01:48, 2.24it/s]
50% ███████	243/485 [01:47<01:47, 2.25it/s]
50% ███████	244/485 [01:47<01:47, 2.24it/s]
51% ███████	245/485 [01:48<01:44, 2.29it/s]
51% ███████	246/485 [01:48<01:42, 2.33it/s]
51% ███████	247/485 [01:49<01:42, 2.33it/s]
51% ███████	248/485 [01:49<01:41, 2.34it/s]
51% ███████	249/485 [01:50<01:40, 2.34it/s]
52% ███████	250/485 [01:50<01:40, 2.33it/s]
52% ███████	251/485 [01:50<01:41, 2.30it/s]
52% ███████	252/485 [01:51<01:40, 2.32it/s]
52% ███████	253/485 [01:51<01:40, 2.30it/s]
52% ███████	254/485 [01:52<01:39, 2.33it/s]
53% ███████	255/485 [01:52<01:42, 2.24it/s]

53% ███████	256/485 [01:53<01:42, 2.23it/s]
53% ███████	257/485 [01:53<01:39, 2.29it/s]
53% ███████	258/485 [01:54<01:39, 2.28it/s]
53% ███████	259/485 [01:54<01:37, 2.31it/s]
54% ███████	260/485 [01:54<01:37, 2.31it/s]
54% ███████	261/485 [01:55<01:35, 2.35it/s]
54% ███████	262/485 [01:55<01:34, 2.37it/s]
54% ███████	263/485 [01:56<01:34, 2.36it/s]
54% ███████	264/485 [01:56<01:35, 2.32it/s]
55% ███████	265/485 [01:57<01:34, 2.32it/s]
55% ███████	266/485 [01:57<01:33, 2.34it/s]
55% ███████	267/485 [01:57<01:35, 2.29it/s]
55% ███████	268/485 [01:58<01:32, 2.35it/s]
55% ███████	269/485 [01:58<01:32, 2.33it/s]
56% ███████	270/485 [01:59<01:34, 2.27it/s]
56% ███████	271/485 [01:59<01:34, 2.27it/s]
56% ███████	272/485 [02:00<01:31, 2.32it/s]
56% ███████	273/485 [02:00<01:31, 2.32it/s]
56% ███████	274/485 [02:00<01:29, 2.35it/s]
57% ███████	275/485 [02:01<01:27, 2.41it/s]
57% ███████	276/485 [02:01<01:28, 2.35it/s]
57% ███████	277/485 [02:02<01:29, 2.31it/s]
57% ███████	278/485 [02:02<01:34, 2.20it/s]
58% ███████	279/485 [02:03<01:35, 2.16it/s]
58% ███████	280/485 [02:03<01:37, 2.11it/s]
58% ███████	281/485 [02:04<01:36, 2.12it/s]
58% ███████	282/485 [02:04<01:31, 2.23it/s]
58% ███████	283/485 [02:04<01:29, 2.25it/s]
59% ███████	284/485 [02:05<01:28, 2.28it/s]

59% ███████	285/485 [02:05<01:27, 2.30it/s]
59% ███████	286/485 [02:06<01:27, 2.27it/s]
59% ███████	287/485 [02:06<01:27, 2.26it/s]
59% ███████	288/485 [02:07<01:26, 2.28it/s]
60% ███████	289/485 [02:07<01:29, 2.19it/s]
60% ███████	290/485 [02:08<01:26, 2.26it/s]
60% ███████	291/485 [02:08<01:25, 2.28it/s]
60% ███████	292/485 [02:08<01:22, 2.34it/s]
60% ███████	293/485 [02:09<01:23, 2.31it/s]
61% ███████	294/485 [02:09<01:21, 2.34it/s]
61% ███████	295/485 [02:10<01:22, 2.31it/s]
61% ███████	296/485 [02:10<01:21, 2.33it/s]
61% ███████	297/485 [02:11<01:21, 2.32it/s]
61% ███████	298/485 [02:11<01:21, 2.29it/s]
62% ███████	299/485 [02:11<01:21, 2.29it/s]
62% ███████	300/485 [02:12<01:20, 2.29it/s]
62% ███████	301/485 [02:12<01:20, 2.29it/s]
62% ███████	302/485 [02:13<01:19, 2.29it/s]
62% ███████	303/485 [02:13<01:19, 2.29it/s]
63% ███████	304/485 [02:14<01:19, 2.28it/s]
63% ███████	305/485 [02:14<01:19, 2.28it/s]
63% ███████	306/485 [02:14<01:18, 2.29it/s]
63% ███████	307/485 [02:15<01:15, 2.35it/s]
64% ███████	308/485 [02:15<01:15, 2.33it/s]
64% ███████	309/485 [02:16<01:15, 2.33it/s]
64% ███████	310/485 [02:16<01:15, 2.30it/s]
64% ███████	311/485 [02:17<01:15, 2.31it/s]
64% ███████	312/485 [02:17<01:15, 2.30it/s]

65% ███████	313/485 [02:17<01:13, 2.34it/s]
65% ███████	314/485 [02:18<01:13, 2.33it/s]
65% ███████	315/485 [02:18<01:12, 2.34it/s]
65% ███████	316/485 [02:19<01:12, 2.32it/s]
65% ███████	317/485 [02:19<01:13, 2.29it/s]
66% ███████	318/485 [02:20<01:13, 2.26it/s]
66% ███████	319/485 [02:20<01:12, 2.29it/s]
66% ███████	320/485 [02:21<01:11, 2.30it/s]
66% ███████	321/485 [02:21<01:12, 2.27it/s]
66% ███████	322/485 [02:21<01:12, 2.26it/s]
67% ███████	323/485 [02:22<01:09, 2.31it/s]
67% ███████	324/485 [02:22<01:10, 2.29it/s]
67% ███████	325/485 [02:23<01:09, 2.31it/s]
67% ███████	326/485 [02:23<01:09, 2.29it/s]
67% ███████	327/485 [02:24<01:08, 2.32it/s]
68% ███████	328/485 [02:24<01:07, 2.31it/s]
68% ███████	329/485 [02:24<01:07, 2.32it/s]
68% ███████	330/485 [02:25<01:06, 2.33it/s]
68% ███████	331/485 [02:25<01:07, 2.29it/s]
68% ███████	332/485 [02:26<01:05, 2.33it/s]
69% ███████	333/485 [02:26<01:05, 2.33it/s]
69% ███████	334/485 [02:27<01:03, 2.39it/s]
69% ███████	335/485 [02:27<01:03, 2.37it/s]
69% ███████	336/485 [02:27<01:02, 2.38it/s]
69% ███████	337/485 [02:28<01:04, 2.31it/s]
70% ███████	338/485 [02:28<01:07, 2.19it/s]
70% ███████	339/485 [02:29<01:06, 2.20it/s]
70% ███████	340/485 [02:29<01:05, 2.21it/s]
70% ███████	341/485 [02:30<01:05, 2.19it/s]

71% [REDACTED]	342/485 [02:30<01:05, 2.18it/s]
71% [REDACTED]	343/485 [02:31<01:03, 2.24it/s]
71% [REDACTED]	344/485 [02:31<01:03, 2.21it/s]
71% [REDACTED]	345/485 [02:32<01:02, 2.25it/s]
71% [REDACTED]	346/485 [02:32<01:02, 2.22it/s]
72% [REDACTED]	347/485 [02:32<01:02, 2.21it/s]
72% [REDACTED]	348/485 [02:33<01:00, 2.27it/s]
72% [REDACTED]	349/485 [02:33<01:00, 2.26it/s]
72% [REDACTED]	350/485 [02:34<00:59, 2.28it/s]
72% [REDACTED]	351/485 [02:34<00:59, 2.25it/s]
73% [REDACTED]	352/485 [02:35<00:58, 2.27it/s]
73% [REDACTED]	353/485 [02:35<00:59, 2.22it/s]
73% [REDACTED]	354/485 [02:35<00:57, 2.27it/s]
73% [REDACTED]	355/485 [02:36<00:56, 2.28it/s]
73% [REDACTED]	356/485 [02:36<00:56, 2.28it/s]
74% [REDACTED]	357/485 [02:37<00:56, 2.26it/s]
74% [REDACTED]	358/485 [02:37<00:55, 2.28it/s]
74% [REDACTED]	359/485 [02:38<00:54, 2.33it/s]
74% [REDACTED]	360/485 [02:38<00:53, 2.35it/s]
74% [REDACTED]	361/485 [02:39<00:53, 2.33it/s]
75% [REDACTED]	362/485 [02:39<00:53, 2.30it/s]
75% [REDACTED]	363/485 [02:39<00:53, 2.29it/s]
75% [REDACTED]	364/485 [02:40<00:53, 2.25it/s]
75% [REDACTED]	365/485 [02:40<00:53, 2.24it/s]
75% [REDACTED]	366/485 [02:41<00:53, 2.24it/s]
76% [REDACTED]	367/485 [02:41<00:53, 2.20it/s]
76% [REDACTED]	368/485 [02:42<00:53, 2.19it/s]
76% [REDACTED]	369/485 [02:42<00:53, 2.16it/s]

76% ███████	370/485 [02:43<00:53, 2.15it/s]
76% ███████	371/485 [02:43<00:51, 2.20it/s]
77% ███████	372/485 [02:43<00:49, 2.26it/s]
77% ███████	373/485 [02:44<00:49, 2.28it/s]
77% ███████	374/485 [02:44<00:47, 2.32it/s]
77% ███████	375/485 [02:45<00:47, 2.33it/s]
78% ███████	376/485 [02:45<00:47, 2.31it/s]
78% ███████	377/485 [02:46<00:47, 2.28it/s]
78% ███████	378/485 [02:46<00:45, 2.33it/s]
78% ███████	379/485 [02:47<00:46, 2.30it/s]
78% ███████	380/485 [02:47<00:44, 2.34it/s]
79% ███████	381/485 [02:47<00:44, 2.32it/s]
79% ███████	382/485 [02:48<00:43, 2.35it/s]
79% ███████	383/485 [02:48<00:44, 2.31it/s]
79% ███████	384/485 [02:49<00:43, 2.34it/s]
79% ███████	385/485 [02:49<00:42, 2.34it/s]
80% ███████	386/485 [02:49<00:41, 2.38it/s]
80% ███████	387/485 [02:50<00:41, 2.35it/s]
80% ███████	388/485 [02:50<00:41, 2.34it/s]
80% ███████	389/485 [02:51<00:40, 2.35it/s]
80% ███████	390/485 [02:51<00:41, 2.29it/s]
81% ███████	391/485 [02:52<00:40, 2.29it/s]
81% ███████	392/485 [02:52<00:39, 2.35it/s]
81% ███████	393/485 [02:52<00:39, 2.34it/s]
81% ███████	394/485 [02:53<00:38, 2.36it/s]
81% ███████	395/485 [02:53<00:38, 2.32it/s]
82% ███████	396/485 [02:54<00:38, 2.33it/s]
82% ███████	397/485 [02:54<00:38, 2.26it/s]
82% ███████	398/485 [02:55<00:38, 2.26it/s]

82%|███████ | 399/485 [02:55<00:38, 2.21it/s]
82%|███████ | 400/485 [02:56<00:37, 2.26it/s]
83%|███████ | 401/485 [02:56<00:36, 2.31it/s]
83%|███████ | 402/485 [02:56<00:36, 2.30it/s]
83%|███████ | 403/485 [02:57<00:37, 2.18it/s]
83%|███████ | 404/485 [02:57<00:36, 2.21it/s]
84%|███████ | 405/485 [02:58<00:35, 2.26it/s]
84%|███████ | 406/485 [02:58<00:36, 2.18it/s]
84%|███████ | 407/485 [02:59<00:35, 2.22it/s]
84%|███████ | 408/485 [02:59<00:34, 2.24it/s]
84%|███████ | 409/485 [03:00<00:33, 2.27it/s]
85%|███████ | 410/485 [03:00<00:33, 2.25it/s]
85%|███████ | 411/485 [03:01<00:33, 2.22it/s]
85%|███████ | 412/485 [03:01<00:32, 2.22it/s]
85%|███████ | 413/485 [03:01<00:31, 2.27it/s]
85%|███████ | 414/485 [03:02<00:31, 2.27it/s]
86%|███████ | 415/485 [03:02<00:30, 2.33it/s]
86%|███████ | 416/485 [03:03<00:29, 2.33it/s]
86%|███████ | 417/485 [03:03<00:29, 2.33it/s]
86%|███████ | 418/485 [03:03<00:28, 2.39it/s]
86%|███████ | 419/485 [03:04<00:27, 2.41it/s]
87%|███████ | 420/485 [03:04<00:27, 2.33it/s]
87%|███████ | 421/485 [03:05<00:27, 2.37it/s]
87%|███████ | 422/485 [03:05<00:27, 2.27it/s]
87%|███████ | 423/485 [03:06<00:27, 2.27it/s]
87%|███████ | 424/485 [03:06<00:26, 2.30it/s]
88%|███████ | 425/485 [03:07<00:26, 2.29it/s]
88%|███████ | 426/485 [03:07<00:26, 2.26it/s]

88%|██████████| 427/485 [03:07<00:25, 2.24it/s]
88%|██████████| 428/485 [03:08<00:25, 2.24it/s]
88%|██████████| 429/485 [03:08<00:25, 2.20it/s]
89%|██████████| 430/485 [03:09<00:24, 2.24it/s]
89%|██████████| 431/485 [03:09<00:24, 2.25it/s]
89%|██████████| 432/485 [03:10<00:23, 2.29it/s]
89%|██████████| 433/485 [03:10<00:23, 2.22it/s]
89%|██████████| 434/485 [03:11<00:22, 2.25it/s]
90%|██████████| 435/485 [03:11<00:22, 2.21it/s]
90%|██████████| 436/485 [03:12<00:22, 2.18it/s]
90%|██████████| 437/485 [03:12<00:21, 2.18it/s]
90%|██████████| 438/485 [03:12<00:21, 2.19it/s]
91%|██████████| 439/485 [03:13<00:20, 2.24it/s]
91%|██████████| 440/485 [03:13<00:19, 2.28it/s]
91%|██████████| 441/485 [03:14<00:19, 2.30it/s]
91%|██████████| 442/485 [03:14<00:18, 2.30it/s]
91%|██████████| 443/485 [03:15<00:17, 2.36it/s]
92%|██████████| 444/485 [03:15<00:17, 2.39it/s]
92%|██████████| 445/485 [03:15<00:16, 2.36it/s]
92%|██████████| 446/485 [03:16<00:16, 2.32it/s]
92%|██████████| 447/485 [03:16<00:16, 2.26it/s]
92%|██████████| 448/485 [03:17<00:16, 2.29it/s]
93%|██████████| 449/485 [03:17<00:15, 2.26it/s]
93%|██████████| 450/485 [03:18<00:15, 2.33it/s]
93%|██████████| 451/485 [03:18<00:14, 2.28it/s]
93%|██████████| 452/485 [03:18<00:14, 2.30it/s]
93%|██████████| 453/485 [03:19<00:14, 2.27it/s]
94%|██████████| 454/485 [03:19<00:13, 2.28it/s]
94%|██████████| 455/485 [03:20<00:13, 2.27it/s]

94%|██████████| 456/485 [03:20<00:12, 2.25it/s]
94%|██████████| 457/485 [03:21<00:12, 2.24it/s]
94%|██████████| 458/485 [03:21<00:12, 2.24it/s]
95%|██████████| 459/485 [03:22<00:11, 2.30it/s]
95%|██████████| 460/485 [03:22<00:10, 2.29it/s]
95%|██████████| 461/485 [03:22<00:10, 2.29it/s]
95%|██████████| 462/485 [03:23<00:10, 2.30it/s]
95%|██████████| 463/485 [03:23<00:09, 2.32it/s]
96%|██████████| 464/485 [03:24<00:08, 2.34it/s]
96%|██████████| 465/485 [03:24<00:08, 2.38it/s]
96%|██████████| 466/485 [03:25<00:07, 2.38it/s]
96%|██████████| 467/485 [03:25<00:07, 2.41it/s]
96%|██████████| 468/485 [03:25<00:07, 2.39it/s]
97%|██████████| 469/485 [03:26<00:06, 2.34it/s]
97%|██████████| 470/485 [03:26<00:06, 2.27it/s]
97%|██████████| 471/485 [03:27<00:06, 2.20it/s]
97%|██████████| 472/485 [03:27<00:05, 2.21it/s]
98%|██████████| 473/485 [03:28<00:05, 2.20it/s]
98%|██████████| 474/485 [03:28<00:04, 2.24it/s]
98%|██████████| 475/485 [03:29<00:04, 2.27it/s]
98%|██████████| 476/485 [03:29<00:03, 2.25it/s]
98%|██████████| 477/485 [03:29<00:03, 2.27it/s]
99%|██████████| 478/485 [03:30<00:03, 2.23it/s]
99%|██████████| 479/485 [03:30<00:02, 2.23it/s]
99%|██████████| 480/485 [03:31<00:02, 2.19it/s]
99%|██████████| 481/485 [03:31<00:01, 2.14it/s]
99%|██████████| 482/485 [03:32<00:01, 2.21it/s]
100%|██████████| 483/485 [03:32<00:00, 2.20it/s]

```
100%|██████████| 484/485 [03:33<00:00, 2.24it/s]
```

```
100%|██████████| 485/485 [03:33<00:00, 2.17it/s]
```

```
[MoviePy] Done.
```

```
[MoviePy] >>> Video ready: challenge_video_output.mp4
```

```
CPU times: user 7min 55s, sys: 48.2 s, total: 8min 44s  
Wall time: 3min 34s
```

In []: