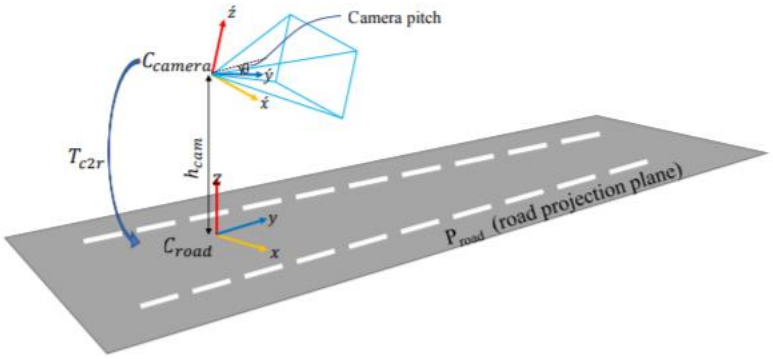
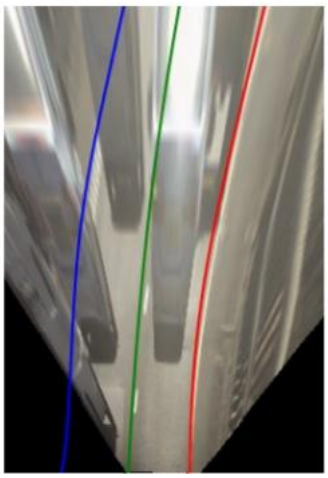
Article about new algorithm for lane detection

Method:

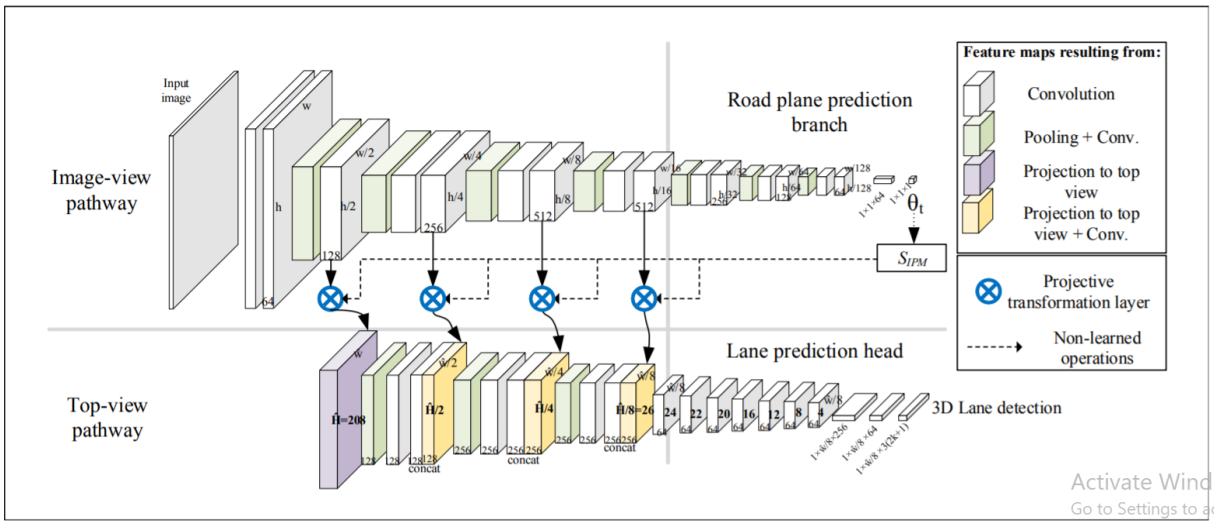
The input is a frame received from image which is located in the front of the vehicle.
the camera's attributes are known (focal length, etc..)
the camera's angle and height can vary.
every lane is represented by it's middle-line and a delimiter $\{C_i\}_{i=1}^{N}\{D_i\}_{i=1}^{N}$
each lane is a 3d entity and our goal is to detect the lines and delimiters of each lane.



IPM – Inverse perspective mapping is a method that helps us manipulate the frame so it would look like it has been taken from above.



The camera's coordinates are X,Y,Z and the data is being processed concurrently in two channels, one for the original frame and the other for the manipulated



סיכום:

Conclusion:

הרעיון המוצג במאמר אכן משפר את האלגוריתמים הקיימים אבל יש בשיטה מספר חסרונות בולטים.

The method presented in the article indeed guarantees a boost of performance with higher accuracy, however there are a few drawbacks:
- implementation is not provided.
- dependency on the camera attributes
- no benchmarks

https://github.com/yuliangguo/Pytorch_Generalized_3D_Lane_Detection