SIMILAR SYSTEMS

PROPOSED SYSTEM

We employ a convolutional neural network based system to detect and extract our region of interest which is the number plate using Sérgio Montazzolli Silva et al’s WPOD-NET(Warped Planar Object Detection Network). We feed images from frames of CCTV camera feeds into WPOD-NET, it encodes object and non-object probablitities and their affine transformations of the number plates in a feature map.

Their architecture has a total of 21 convolutional layers, where 14 are inside residual blocks .The size of all convolutional filters is fixed in 3 × 3. ReLU activations are used throughout the entire network, except in the detection block. There are 4 max pooling layers of size 2 × 2

and stride 2 that reduces the input dimensionality by a factor of 16. The final layers of WPOD-NET is the detection block consists of two parallel convolutional layers, the first of the parallel layers is activated by a softmax function to output the probabilities of whether the image contains a license plate or not. The second of the parallel layers doesn't have any activation and it regresses the affine parameters of the feature map. The network outputs is used to extract a region of interest which is the number plates. This is then fed in OCR system proposed by