

## Recognition of Visual Arabic Scripting News Ticker From Broadcast Stream

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**Abstract:** News ticker recognition is a vital area of research due to its applications such as information analysis, opinion mining and language translation for media regulatory authorities. Without automated systems, manual anatomizing is difficult. In this paper, we focus on the automatic Arabic and Urdu news ticker recognition system. It mainly consists of ticker segmentation and text recognition to generate textual data for various online services. Our work investigates character-wise explicit segmentation and syntactical models with Kufi and Nastaleeq fonts. Various network models anticipate learning of deep representations by homogenizing the classes regardless of inter-symbol correlations and linguistic taxonomy. The proposed learning model incorporates fairness by maximizing the balance among sensitive features of characters in a unified manner. Furthermore, we demonstrate the efficiency of the proposed model by carrying out experiments using customized news tickers datasets with accurate character-level and component-level labeling. Moreover, our method is evaluated on a challenging Urdu Printed Text Images (UPTI) dataset that only provides ligature based annotations. The proposed method attains 98.36%, outperforms the current state of the art method. Ablation investigations show that our technique enhances the performance of character classes with low symbol frequencies.