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Title:

Improving Text Extraction Accuracy with Image Preprocessing

Areas of Focus:

Computer Vision, Natural Language Processing

Mentor/Guide:

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College:

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Abstract:

Digitization allows us to immortalize a physical entity by creating a digital representation of it on our devices. It saves us time in manually sifting through physical storage units such as albums and notebooks, and provides us with programs to manage and secure our data. We often take images of Receipts or Invoices, Identity Cards, and nutritional labels to save a copy of their details. This can be taken a step further by automating the process of information extraction and documentation.

Advancements in computer vision have provided us with the expertise to create tools for text detection and extraction. But it is still an ongoing challenge because documents with unstructured layouts, poor image quality, and noise around the text yield very low accuracy in text extraction results. Conquering this challenge would require the image to be highly enhanced through preprocessing techniques such as Brightness Correction, Contour Detection, Skewness Correction, Morphology, and Binarization. A mechanism made from the best combination of image preprocessing techniques prior to text extraction can improve text accuracy to a large extent.

*Keywords: Computer Vision, Image preprocessing, Text Extraction*

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