Optical Character Recognition Based Webapp

Rohit Yadav

Student, Department of Computer Science and Information Technology

Dronacharya College of Engineering, Gurgaon, Haryana, India

Abstract: *As the use of computers in our daily lives increases, so has the need for a natural procedure to interact with the computers. The ultimate aim of human computer interaction is to bring the change that there is always a natural way of interacting with computers coupled with ease and flexibility. Printed and textual media such as prescriptions, invoices, receipts, etc. occupies a large segment of our day-to-day activities and given their volume, it is inefficient to manage them physically as there's always an associated risk of fading, damage, misplacing, etc. and hence a medium is required for their digital conversion. In this project, we have developed a robust, cross-platform web application that can process the images using PyTesseract based algorithms that can efficiently extract the textual data to facilitate the storage and retrieval of the same. The extracted text can be downloaded as a text file andcan also be translated into the desired language. This is an active field of research and thus this paper also discusses various current implementations of the mentioned concept. The Optical Character Recognition framework finds applications in a variety of fields such as business process activities, number plate recognition, KYC and banking processes to name a few.*

Keywords: OCR, PyTesseract, Image Processing, Text detection, Text recognition, Digitization, Django, Web app.

REFERENCES

[1]. https://www.forbes.com/sites/bernardmarr/2018/05/21/how-much-data-do-we-create-ev ery-day-the-mind-blowing-stats-everyone-should-read/?sh=77b6535560ba

[2]. Smith, R. (2007, September). An overview of the Tesseract OCR engine. In Ninth international conference on document analysis and recognition (ICDAR 2007) (Vol. 2, pp. 629-633). IEEE.

[3]. Jayoma, J. M., Moyon, E. S., & Morales, E. M. O. (2020, December). OCR Based Document Archiving and Indexing Using PyTesseract: A Record Management System for DSWD Caraga, Philippines. In 2020 IEEE 12th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment, and Management (HNICEM) (pp. 1-6). IEEE.

[4]. Pavithra, E., & Kumar, M. A. (2017). Portable Camera Based Text, Product Label and Currency Note Reading from the Hand Held Objects for Blind Person. Asian Journal of Applied Science and Technology (AJAST), 1(3), 66-69.

[5]. Rekha, M. (2021). Educational Training For Processing Invoice Of Vendor Identification And Payments Using Python-Tesseract. Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12(11), 224-228.

[6]. Tafti, A. P., Baghaie, A., Assefi, M., Arabnia, H. R., Yu, Z., & Peissig, P. (2016, December). OCR asa service: an experimental evaluation of Google Docs OCR, Tesseract, ABBYY FineReader, and Transym. In International Symposium on Visual Computing (pp. 735-746). Springer, Cham.

[7]. Google docs - http://docs.google.com

[8]. Tesseract OCR - https://github.com/tesseract-ocr

[9]. Abbyy OCR - https://finereaderonline.com/en-us/Tasks/Create

[10]. Transym - http://www.transym.com/

[11]. Rasmussen, L. V., Peissig, P. L., McCarty, C. A., & Starren, J. (2012). Development of an optical character recognition pipeline for handwritten form fields from an electronic health record. Journal of the American Medical Informatics Association, 19(e1), e90-e95.

[12]. Sharma, P. S., Roy, P. K., Ahmad, N., Ahuja, J., & Kumar, N. (2019, March). Localisation of License Plate and Character Recognition Using Haar Cascade. In 2019 6th International Conference on Computing for Sustainable Global Development (INDIACom) (pp. 971-974). IEEE.

[13]. Singh, A., Bacchuwar, K., & Bhasin, A. (2012). A survey of OCR applications. International Journal of

Machine Learning and Computing, 2(3), 314.

[14]. Google Tesseract OCR - https://opensource.google/projects/tesseract