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Document scanning from R & D to a real product at Anyline GmbH

The path of a research idea becoming a market product for customers' use is filled with unexpected events and challenges. This presentation will allow you to have a look at the evolution of Machine Learning in the last ten years and at the technological shift from the use of external devices to mobile devices for document scanning purposes. The story the Document Scanner developed at Anyline GmbH in Vienna, Austria will start with an exemplary initial approach based on pure computer vision, analyzing limitations and real-life issues. It will continue with the next step, the deep learning approach in which some interesting CNN architectures will be presented and analyzed. Finally, a closer look will be taken to how to define image quality and how to implement it in a marketed product.

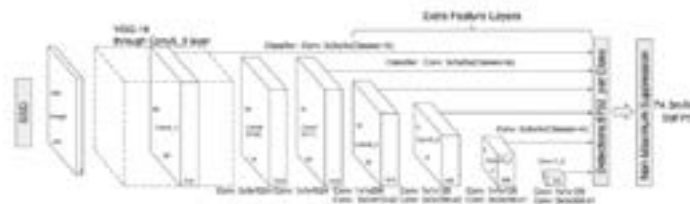


Figure: SSD architecture of CNN, a well know deep learning approach for object detection.

Recent Publications

1. Liu, W., Anguelov, D., Erhan, D., Szegedy, C., Reed, S., Fu, C. Y., & Berg, A. C. (2016, October). Ssd: Single shot multibox detector. In European conference on computer vision (pp. 21-37). Springer, Cham.
2. Simonyan, K., & Zisserman, A. (2014). Very deep convolutional networks for large-scale image recognition. arXiv preprint arXiv:1409.1556.
3. Redmon, J. . & Farhadi, A. (2017) YOLO9000: better, faster, stronger. arXiv preprint
4. Wang, X., Tian, B., Liang, C., & Shi, D. (2008, May). Blind image quality assessment for measuring image blur. In Image and Signal Processing, 2008. CISP'08. Congress on (Vol. 1, pp. 467-470). IEEE.
5. Bianco, S., Celona, L., Napoletano, P., & Schettini, R. (2018). On the use of deep learning for blind image quality assessment. Signal, Image and Video Processing, 12(2), 355-362.

Biography

Aniello R Patrone is a Computer Vision Engineer at Anyline GmbH, Vienna, Austria. A Computer Scientist by education, he completed Master Studies in Computer Vision in Naples, Italy, where he worked for the development of a marketed eye-tracker solution. His curiosity brought him to pursue a PhD in Computer Vision at the Computational Science Center of the University of Vienna, Austria. He has a proven record of publications in scientific journals and presentations at international conferences. Stepping out of the academic environment into the industry, he worked on video surveillance systems and recently joined the innovative company, Anyline GmbH.

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