

Generic Layout Analysis of Diverse Collection of Documents



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Diverse Collection of Documents



Text-line is the dominant geometrical layout structure for collection of diverse documents.

Problem:

A large number of text-line finding methods are proposed, but most of them are **domain specific**.

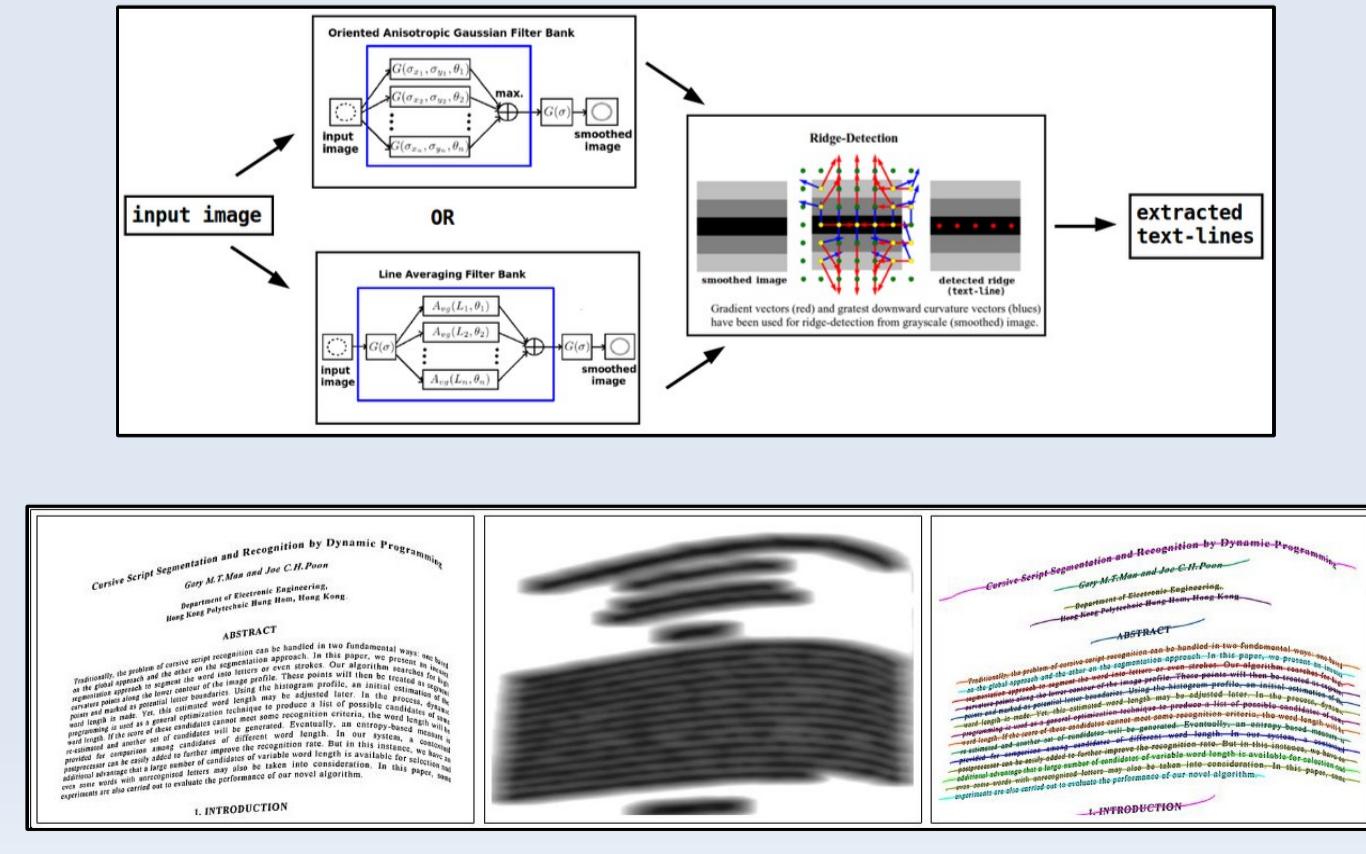
Solution:

A **generic text-line extraction method** that can be equally applied on a collection of diverse documents.

Generic Text-Line Extraction Method

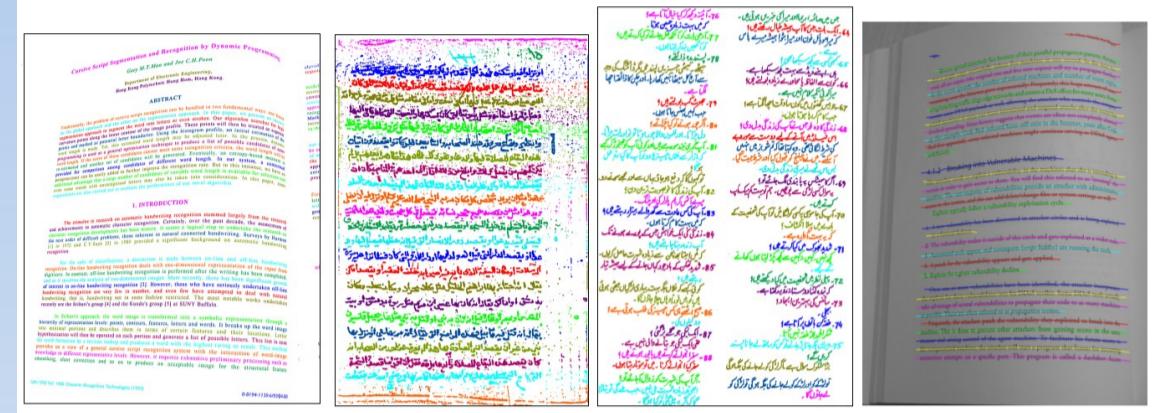
It is a combination of two standard image processing techniques [1, 4, 17]:

- Filter Bank Smoothing
- Ridge Detection



Applications

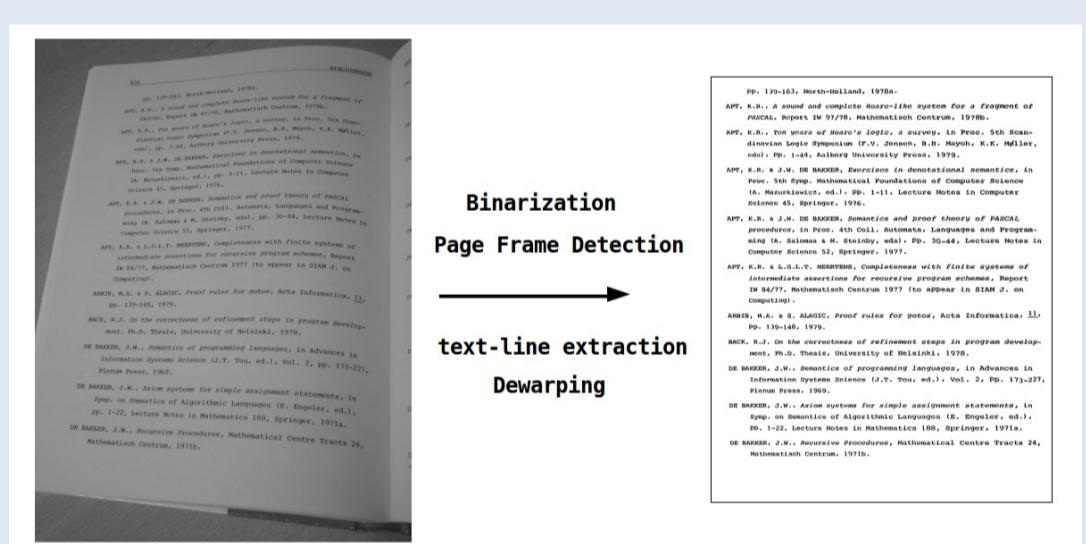
Text-Line Extraction of Diverse Documents Collection [1]



High Performance Layout Analysis of Arabic Documents [3, 5, 9]



Preprocessing of Camera-Captured Documents [7, 12, 15, 16]



Publications

- [1] S. S. Bukhari, F. Shafait, T. M. Breuel, "An Algorithm for Text-Line Extraction from Diverse Document Collections", IEEE Transaction of Image Processing (under review).
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- [4] S. S. Bukhari, F. Shafait, T. M. Breuel, "Text-Line Extraction using a Convolution of Isotropic Gaussian Filter with a Set of Line Filters", 11th Int. Conf. on Document Analysis and Recognition, ICDAR'11, China, 2011.
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- [15] S. S. Bukhari, F. Shafait, T. M. Breuel, "Dewarping of Camera-Captured Document Images", 3rd Int. Workshop on Camera Based Document Analysis and Recognition, CBDAR'09, Spain, 2009.
- [16] S. S. Bukhari, F. Shafait, T. M. Breuel, "Foreground-Background Regions Guided Binarization of Camera-Captured Document Images", 3rd Int. Workshop on Camera Based Document Analysis and Recognition, CBDAR'09, Spain, 2009.
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