

## **ABSTRACT**

**THESIS:** Automatic Line Segmentation in Late Medieval Latin Manuscripts

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This thesis describes a new line segmentation method that is optimized for medieval manuscripts. Using a thinned version of the binarized document image, the segmentation algorithm extracts two types of salient features from the handwritten patterns: nodes, whose distribution allows for the detection of line axes; segments, which are labeled according to the nodes they connect. This method obtains very good results on manuscripts that are usually considered hard to segment because of the numerous overlapping and touching lines. By contrast with many existing segmentation algorithms, this method does not rely on user-entered parameters and is not overly sensitive to the quality of the preprocessing treatments. Although more work is required to make it resistant to fluctuating lines, this line separation technique can already handle a large set of medieval documents and provides a useful input to a character segmentation program.