

Paleographic Dating of Birch Bark Manuscripts

K.A. Sidorov
sidorovk@cardiff.ac.uk
Cardiff University, Cardiff, UK

Abstract

We address the problem of estimating the age of an important class of historical documents: mediaeval manuscripts on birch bark, found in Novgorod and other cities in Northwest Russia. These birch bark manuscripts are one of the most valuable corpora of Old Russian texts, and a crucially important source of information about mediaeval history and evolution of the language. Accurate dating of BBMs is necessary in order to place them in a correct historical context, before historians and linguists can take advantage of their valuable contents.

In this work, we investigate how the age of birch bark manuscripts can be automatically estimated from their appearance (paleographically), using computer vision and machine learning techniques. Our method achieves mean absolute accuracy of 18.9 years which is comparable to or surpasses the performance of human experts and of other computational paleography studies. Therefore, our results may corroborate and refine existing paleographic analysis methods.



Kirill Sidorov
(*PhD, Assistant Professor,*
School of Computer Science and Informatics,
Cardiff University)