

In this thesis, we deal with online recognition of handwritten mathematical formulas. We provide an introduction to the field of study, discuss the current state of the art and survey several existing implementations in detail. Then we present our own solution comprehending two steps. In the first step, individual symbols are detected utilizing temporal and spatial relations of the handwritten strokes. Then we recognize the symbols by combining results provided by an existing third party library with our rule based methods and template symbols matching. In the second step, a structure of the formula is examined. We introduce a novel approach incorporating a grammar based description of the formula with a statistical evaluation of the subexpressions. We also discuss related problems comprehending implementation of the recognizer as a web application and acquisition of the sample data.