Constructive Formalization of Regular Languages

Jan-Oliver Kaiser

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Abstract

Existing formalizations of regular languages in constructive settings are mostly limited to regular expressions and finite automata. Furthermore, these usually require in the order of 10,000 lines of code. The goal of this thesis is to show that an extensive, yet elegant formalization of regular languages can be achieved in constructive type theory. In addition to regular expressions and finite automata, our formalization includes the Myhill-Nerode theorem. The entire development weighs in at approximately 3,300 lines of code.

Citations?

Reduce & update

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References