

Abstract

This dissertation investigates if fresh-register automata can be learned via existing automata learning techniques. Fresh-register automata are a relatively new class of automata, capable of encoding the properties of π -calculus models, which are used to describe the essential behaviours of concurrent systems.

This was attempted by creating a system which maps fresh-register automata to register automata models, before learning with the register automata learning tool Tomte and finally mapping back to fresh-register automata.

Results from this approach revealed that fresh-register automata models could not be consistently learned, mainly due to features regarding the learning of register automata by Tomte.