**Embedding Programming Languages: PROLOG in HASKELL**

by

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Abstract

This thesis focuses on combining the two most important and wide spread declarative programming paradigms, functional and logic programming. The proposed approach aims at adding logic programming features which are native to PROLOG onto HASKELL. We develop extensions which replicate the target language by utilizing advanced features of the host language for an efficient implementation.

The thesis aims to provide insights into merging two declarative languages namely, HASKELL and PROLOG by embedding the latter into the former and analyzing the results of doing so as the two languages have conflicting characteristics. The finished products will be something similar to a *haskellised* PROLOG which has logic programming-like capabilities.