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1 Introduction

Dear Kevin Clancy, Heather Miller and Christopher Meiklejohn.

I very much enjoyed reading your whitepaper titled **Monotonicity Types**. While reading I more and more got the suspicion that it might be possible to implement the essence of Monotonicity Types today in Haskell, foregoing the need to build a completely separate language and compiler to annotate functions as monotonic, antitonic or neither.

This turned out to be a bit of a challenge, and I learned a lot about the dependently typed features that Haskell (provided you enable some GHC extensions) offers. I believe the end result to be usable/practical today.

In this `literate haskell` document, I'll explain the implementation details. As `literate haskell`, this org-mode document can be read both as \LaTeX -PDF as well as Haskell source code.

2 Preamble