

A programming language for machine learning

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1 Introduction

Machine learning (ML) is often considered a programming paradigm like imperative and functional [1].

In an exhaustive code review study of machine learning programs that were trying to change from imperative to graph execution [2] a large number of bugs were found and classified. These bugs can be a result of a lack of a universal language [1].

References

- [1] Mike Innes, Stefan Karpinski, Viral Shah, David Barber, PLEPS Saito Stenetorp, Tim Besard, James Bradbury, Valentin Churavy, Simon Danisch, Alan Edelman, et al. On machine learning and programming languages. Association for Computing Machinery (ACM), 2018.
- [2] Tatiana Castro Vélez, Raffi Khatchadourian, Mehdi Bagherzadeh, and Anita Raja. Challenges in migrating imperative deep learning programs to graph execution: an empirical study. In *Proceedings of the 19th International Conference on Mining Software Repositories*, MSR '22, page 469–481, New York, NY, USA, 2022. Association for Computing Machinery.