**Too many AI researchers think real-world problems are not relevant**

The purpose of this article is to accentuate the point that machine learning research is beginning to marginalize theoretical advances over application. The author puts into question the real motivation of advancing machine learning and if we are optimizing the utility of such technology.

This article is organized in which highlights an issue and poses a question regarding the objective of machine learning. The article states that having this drive toward theoretical advances will begin to create machine learning models designed for perfect environments but are not fitted for practical use thus carrying over latent biases when applied.

Continuing further on this path and widening this marginalization will only create a positive feedback loop on unusable models. Using such benchmark tests to further the machine learning field is not useful because the data sets do not capture the dynamic and inherent behaviors of the real data. Promoting theoretical advance over application advance is creating resistance on the progress of high-impact solutions and will further widen the disparity if continued.

The conclusion of the article is that the machine learning community should enforce and foster application-based research over strictly theoretical as application-based provides greater utility and contributes to the human-centric objective function.

**Thoughts:**

I related to this article because this has been a trend I have noticed as well as I have read research papers. I share the same sentiment as “we have been so focused on if we can, that we forget to ask if we should.” This article also made me think of a point in the machine learning field that I never thought about before: AI democratization.

Such marginalization mentioned in the article is due to the high entrance barrier to machine learning so people of higher education have created a silo, but if the entrance barrier is lowered (ML is democratized), there will more focus on application and the paradigm shift of machine learning will move from a science to a tool.

**Troubling Trends in Machine Learning Scholarship**

The purpose of this paper is to highlights the poor practices implemented during the creation of papers or ML scholarship and approaches the problem through the perspective of service to the readers. The paper focuses mainly on four patterns commonly seen: failure to differentiate the explanation and speculation, failure to identify sources of insight, obfuscating clarity with mathematics, and the misuse of language.

The author provides examples for each of the four pattern and contrasts them with positive examples as to offer a course to correct the poor practices. During the explanation of the pattern of differentiating between explanation and speculation, the positive example states the importance of conveying uncertainty when presenting a paper/study. Failure to identify sources of insight can happen intentionally or otherwise, as many variables are experimented with, it is easy to lose sight of which change made the impact. Mathematics can be used to explain but it can also hide understanding thus resulting in less clarity for the reader.

The author speculated that such trends came about due to rapid growth of the machine learning field and through this fast growth, poor practices are proliferated. Once this has been analyzed, the author suggests ways to intervene these trends through a series of questions to correct the path of authors and publishers/reviewers alike.

**Thoughts:**

This paper is useful as it prevents junior researchers from learning these bad practices from early on. Identifying and being aware of these trends early on in one’s career may help intervening in furthering such trends. Tying this back to the first reading, I believe following a more application-focused route in machine learning may also diminish these trends as the application grounds the math and terminology to reality and aiding in easing explanation. I like this paper due to the point that I believe machine learning should be explainable to all in simple language to allow one to build intuition and sparking curiosity.