

Building Reproducible, Reusable, and Robust Machine Learning Software

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ABSTRACT

We have seen significant achievements with machine learning in recent years. Yet reproducing results for state-of-the-art deep learning methods is seldom straightforward. High variance of some methods can make learning particularly difficult. Furthermore, results can be brittle to even minor perturbations in the domain or experimental procedure. In this talk, I will review challenges that arise in experimental techniques and reporting procedures in deep learning, with a particular focus on reinforcement learning. I will also describe several recent results and guidelines designed to make future results more reproducible, reusable and robust.

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