Software 2.0: Machine Learning is Changing Software

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Software has been "eating the world" for the last ten years, which has had profound changes for how science, business, and government operate. In the last few years, a new phenomenon has started to emerge: machine learning has begun to eat software. Machine learning is radically changing how one builds, deploys, and maintains software--leading some to use the loosely defined phrase Software 2.0. One example difference is that in Software 2.0 systems one expresses domain knowledge by creating and shaping training sets (examples) instead of programmatically as in more classical software development.

This talk describes our work on Snorkel, a first-of-its-kind prototype Software 2.0 system, that is in use with academic collaborators and at some of the largest corporations in the world. Our goal is to understand the foundational theoretical challenges posed by these new systems and practically understand how these new techniques changes not only how large companies build software, but how it may enable scientists and academics to more rapidly build machine-learning based applications.

More information about Snorkel is available at snorkel.stanford.edu.