Model Evaluation Service: Improving Machine Learning Model Development Efficiency

(Technical Report)

The Struggle over Digital Privacy in the United States

(STS Research Paper)

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Preface

How can machine learning improve productivity in organizations? Recent developments in machine learning (ML) offer new possibilities in automation that may transform numerous economic sectors and boost organizational efficiency. Yet ML also threatens to accelerate problematic trends, including invasion of personal privacy, unimpeded user data collection and monetization, and propagation of targeted misinformation.

During an internship with the Softlines Fit team at Amazon Fashion, the author observed stresses attributable to the lack of any standardized means of evaluating machine learning models. A Model Evaluation Service (MES), a standardized way of evaluating models, is therefore proposed.

How does the struggle over digital privacy manifest in the United States? According to proverbial wisdom, when the customer pays nothing, the customer is the product. Privacy advocates demand regulation to protect the public's digital privacy. To promote regulation, privacy advocates typically invoke esteemed principles, particularly personal rights, basic fairness, informed consent, and protection of the vulnerable from the powerful. To resist regulation, data collectors take advantage of their advantages in resources; they also frame their business interests in terms of ideas and values such as free enterprise, user responsibility, personal convenience, and user experience optimization.