

UpML 2022 Call for Papers

In modern ML domains, state-of-the-art performance is attained by highly overparameterized models that are expensive to train, costing weeks of time and millions of dollars. At the same time, after deploying the model, the learner may realize issues such as leakage of private data or vulnerability to adversarial examples. The learner may also wish to impose additional constraints post-deployment, for example, to ensure fairness for different subgroups. Retraining the model from scratch to incorporate additional desiderata would be expensive. As a consequence, one would instead prefer to update the model, which can yield significant savings of resources such as time, computation, and memory over retraining from scratch. Some instances of this principle in action include the emerging field of machine unlearning, and the celebrated paradigm of fine-tuning pretrained models. The goal of our workshop is to provide a platform to stimulate discussion about both the state-of-the-art in updatable ML and future challenges in the field.

This workshop will bring together researchers from various ML communities to discuss recent theoretical and empirical developments in updatable machine learning. Specific topics of interest for the workshop include (but are not limited to) theoretical and empirical works in:

- Methods to update a trained a model post-deployment for:
 - Robustness to corruptions
 - Fairness
 - Domain shifts
 - Privacy
 - Additional safety constraints
- Machine unlearning
- Resource efficient model fine-tuning
- Model updates under communication constraints
- Efficient training and deployment of updatable ML systems
- Memory / computation tradeoffs in updatable ML
- Threats to updatable ML systems and possible fixes
- Long-term and societal impacts of updatable ML systems
- Ensemble methods for efficient model updates

Submissions:

The goal of UpML is to bring together researchers from various theoretical and applied ML communities working on topics related to post deployment modification of a trained model. We seek contributions from different research areas of computer science, and statistics.

Authors are invited to submit a short abstract (4 pages + references maximum) of their work. Submissions are single-blind (non-anonymized), and there is no prescribed style file (though authors should be considerate of reviewers in their selection).

Submissions will undergo a lightweight review process and will be judged on originality, relevance, interest and clarity. Submission should describe novel work or work that has already appeared elsewhere but that can stimulate the discussion between different communities at the workshop. Accepted abstracts will be presented at the workshop either as a talk or a poster. The workshop will not have formal proceedings and is not intended to preclude later publication at another venue.

Submission website:

OpenReview (<https://openreview.net/group?id=ICML.cc/2022/Workshop/UpML>)

Note the “open” features of OpenReview will not be used, and visibility of all submissions, reviews, and accepted papers will be restricted to the program committee (similar to other systems like EasyChair, CMT, HotCRP, etc.).

Dates:

Submission Deadline: May 12, 2022 (Anywhere on Earth)

Notification: June 13, 2022

Workshop: July 22 or 23, 2022