Interactive Adaptive Learning 2024

Workshop Proceedings

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Abstract

This document is the preface of the proceedings of the 8th International Workshop & Tutorial on Interactive Adaptive Learning, held on September 9th, 2024 in Vilnius, Lithuania. We received 11 submissions for peer-review, out of which we accepted 8 papers for this volume. In addition, we publish an extended abstract of the tutorial that we give as a part of the workshop program.

Preface

Methods of machine learning are approaching their limits whenever training data of a high quality are scarce. The potential reasons for data scarcity are manifold: limited capabilities of human supervisors and processing systems, a need for early predictions which can later be refined, or transfer settings where the only available data stem from some different learning task.

Situations like these demand methods that improve the overall life-cycle of machine learning models, including interactions with human supervisors, interactions with other processing systems, and adaptations to different forms of data that become available at different points in time. This demand includes techniques for evaluating the impact of additional resources (e.g., data) on the learning process; strategies for actively selecting information to be processed or queried; techniques for reusing knowledge over time, across different domains or tasks, by recognizing similarities and by adapting to changes; and methods for effectively using different types of information, like labeled and unlabeled data, constraints, and knowledge. Techniques of this kind are being investigated, for example, in the areas of adaptive, active, semi-supervised, and transfer learning. While these investigations often happen in isolation of each other, real use cases of machine learning require interactive and adaptive systems that operate under changing conditions and address the challenges of volume, velocity, and variability of the data.

This combination of a workshop and tutorial continues to stimulate research on systems that combine multiple areas of interactive and adaptive machine learning, by bringing together researchers and practitioners from these different areas. We have welcomed contributions that present a novel problem, propose a new approach, report practical experience with such a system, or raise open questions for the research community. This edition of the Interactive Adaptive Learning workshop, which is co-located with ECML-PKDD, continues a successful series of events, including a workshop & tutorial at ECML-PKDD 2023 in Torino, a workshop at ECML-PKDD 2022 in Grenoble, a workshop at the virtual ECML-PKDD 2021, a workshop at the virtual ECML-PKDD 2020, a workshop & tutorial at ECML-PKDD

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2019 in Würzburg, a workshop at ECML-PKDD 2018 in Dublin, a tutorial at IJCNN 2018 in Rio, and a workshop & tutorial at ECML-PKDD 2017 in Skopje.

This year, we accepted 8 papers out of 11 submissions for their publication in these workshop proceedings. In addition to these contributions, we publish an extended abstract of a tutorial that belongs to the workshop program. We thank all authors for their valuable submissions and all members of the program committee for their great support.

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Mirko Bunse, Marek Herde, Georg Krempl, Vincent Lemaire, Minh Tuan Pham, Amal Saadallah, and Alaa Tharwat

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