

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.

August 2024

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

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Contents

| | |
|--|-------|
| Preface | i–iii |
| <i>Mirko Bunse, Marek Herde, Georg Krempf, Vincent Lemaire, Minh Tuan Pham, Amal Saadallah, and Alaa Tharwat</i> | |

Extended Abstracts

| | |
|---|-------|
| Tutorial: Interactive Adaptive Learning | 1–6 |
| <i>Marek Herde, Minh Tuan Pham, Alaa Tharwat, and Bernhard Sick</i> | |
| Deep Transfer Hashing for Adaptive Learning on Federated Streaming Data | 7–11 |
| <i>Manuel Röder and Frank-Michael Schleif</i> | |
| Towards Deep Active Learning in Avian Bioacoustics | 12–17 |
| <i>Lukas Rauch, Denis Huseljic, Moritz Wirth, Jens Decke, Bernhard Sick, and Christoph Scholz</i> | |

Research Papers

| | |
|---|--------|
| Amortized Active Learning for Nonparametric Functions | 18–32 |
| <i>Cen-You Li, Marc Toussaint, Barbara Rakitsch, and Christoph Zimmer</i> | |
| General Reusability: Ensuring Long-Term Benefits of Deep Active Learning | 33–46 |
| <i>Paul Hahn, Denis Huseljic, Marek Herde, and Bernhard Sick</i> | |
| Suitability of Modern Neural Networks for Active and Transfer Learning in Surrogate-Assisted Black-Box Optimization | 47–67 |
| <i>Martin Holeňa and Jan Koza</i> | |
| Active Learning with Physics-Informed Graph Neural Networks on Unstructured Meshes | 68–76 |
| <i>Jens Decke, Alexander Heinen, Bernhard Sick, and Christian Gruhl</i> | |
| Combining Large Language Model Classifications and Active Learning for Improved Technology-Assisted Review | 77–95 |
| <i>Michiel P. Bron, Berend Greijn, Bruno Messina Coimbra, Rens van de Schoot, and Ayoub Bagheri</i> | |
| Contextual kNN Ensemble Retrieval Approach for Semantic Postal Address Matching | 96–111 |
| <i>El Moundir Faraoun, Nédra Mellouli, Stéphane Millot, and Myriam Lamolle</i> | |