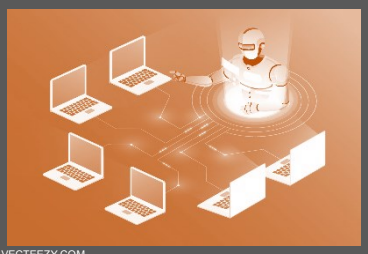
Call for Book Chapters



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Springer Book on:

Federated and Transfer Learning

Transfer Learning (TL) is a sub-field of machine learning that aims to extract the information from a given domain and transfer it to a target domain. The idea of transfer learning in machine learning is on the importance of reusing previously learned knowledge by machine learning algorithms.

On the other hand, Federated Learning (FL) is partly connected to TL, as they are mostly paired to make the most of the data. FL aims to learn from decentralized data that is distributed over a very large-scale network. Compared to TL, FL is a newer area of research with a limited history. FL is aimed at model construction using distributed data while maintaining data privacy.

The success rate of TL depends on the common portion of the target and source domains, and it may fail if there is minimal common between the two. In addition, the similarity between domains can be misleading sometimes. Although FL enables decentralized learning and tackles the scarcity of data, it has a number of challenges as well.

This book aims to help readers to understand TL in conjunction with FL, and highlight connections and differences between these two learning paradigms. The proposed book then bridges the gap between TL and FL, and includes a number of recent chapter contributions to frame this space of research. This book will be a comprehensive study on the recent advancements and challenges in TL and FL and an investigation into the connections between the two learning paradigms.

This Springer edited book solicits contributed chapters including but not limited to the following topics: TL, domain adaptation, zero-shot learning, one-shot learning, few-shot learning, multitask learning, meta learning, domain confusion, self-taught leaning, domain generalization, continual/lifelong learning, recent challenges in TL, TL for non-stationary environments, using deep learning for TL, TL-based recommender systems, horizontal FL, vertical FL, transfer FL, recent trends in securing FL, personalization of FL, connection of FL to supervised learning, connection of FL to reinforcement learning, FL security for privacy preserving, connection between FL and blockchain, multi-agent systems, deep learning frameworks for FL, and their applications. acts as soon as possible

Submission Procedure

Prospective authors should submit a tentative title, names and affiliation of authors and a brief abstract with keywords of their proposed contribution via EasyChair. We strongly encourage authors to submit abstracts as soon as possible before September 1, 2021.

Chapter submissions can be done via EasyChair. Chapter submissions should conform to the standard guidelines of Springer's book chapter format. Manuscripts must be prepared using Latex or Word according to Springer's author template found here. Submitted manuscripts will be refereed by at least two expert reviewers following a single-blind review process. Accepted works will be published as part of this edited book by Springer.

For any questions related to this edited book, please email the book editors listed to the left.

IMPORTANT DATES

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