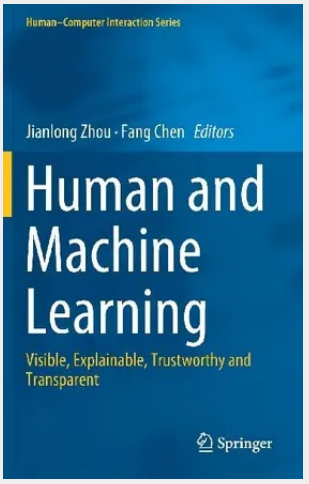
Zhou / Chen

Human and Machine Learning

Visible, Explainable, Trustworthy and Transparent



With an evolutionary advancement of Machine Learning (ML) algorithms, a rapid increase of data volumes and a significant improvement of computation powers, machine learning becomes hot in different applications. However, because of the nature of “black-box” in ML methods, ML still needs to be interpreted to link human and machine learning for transparency and user acceptance of delivered solutions. This edited book addresses such links from the perspectives of visualisation, explanation, trustworthiness and transparency. The book establishes the link between human and machine learning by exploring transparency in machine learning, visual explanation of ML processes, algorithmic explanation of ML models, human cognitive responses in ML-based decision making, human evaluation of machine learning and domain knowledge in transparent ML applications.

This is the first book of its kind to systematically understand the current active research activities and outcomes related to human and machine learning. The book will not only inspire researchers to passionately develop new algorithms incorporating human for human-centred ML algorithms, resulting in the overall advancement of ML, but also help ML practitioners proactively use ML outputs for informative and trustworthy decision making.

This book is intended for researchers and practitioners involved with machine learning and its applications. The book will especially benefit researchers in areas like artificial intelligence, decision support systems and human-computer interaction.

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