



## Digital Signal and Image Processing as Underpinned with ML/AI — Technologies and Applications

Guest Editors:

**Prof. Dr. H. Bryan Riley**

College of Engineering,  
Computing and Applied Science,  
Clemson University, Clemson, SC  
29634, USA

**Prof. Dr. Mehmet Celenk**

School of Electrical Engineering  
and Computer Science, Ohio  
University, Athens, OH 45701,  
USA

Deadline for manuscript  
submissions:

**closed (15 March 2021)**

### Message from the Guest Editors

Dear Colleagues,

Research and exploration of recognition algorithms continues to be of great interest among researchers and practitioners in laboratories, corporations, universities, and various organizations. The onset of Artificial Intelligence and machine learning (ML) are now dedicated to ultra-fast pattern recognition. Electronic temperature devices and kiosk-based facial scanners with  $\leq 0.5$  °C are available via commercial markets, higher-performing integrated systems are required globally. The user-friendly human-machine interfaces that swiftly identify potential safety threats and support the mitigation of large-scale exposures are in demand. This Special Issue seeks to report recent mathematical developments and ML algorithms as applicable in both the medical and health diagnostic fields.

This Special Issue is dedicated to the presentation of novel approaches and results in the aforementioned areas. We invite you to submit significant updates to previously published papers or completely new manuscripts for double peer review.





an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Andreas Holzinger**

1. Human-Centered AI Lab,  
Institute of Forest Engineering,  
Department of Ecosystem  
Management, Climate and  
Biodiversity, BOKU University,  
Vienna, Austria

2. Institute of Human-Centered  
Computing, Faculty of Computer  
Science and Biomedical  
Engineering, Graz University of  
Technology, Graz, Austria

3. xAI Lab, Alberta Machine  
Intelligence Institute, University  
of Alberta, Edmonton, AB,  
Canada

## Message from the Editor-in-Chief

Machine learning deals with understanding intelligence to design algorithms that can learn from data, gain knowledge from experience and improve their learning behaviour over time. The challenge is to extract relevant structural and/or temporal patterns (“knowledge”) from data, which is often hidden in high dimensional spaces, thus not accessible to humans. Many application domains, e.g., smart health, smart factory, etc. affect our daily life, e.g., recommender systems, speech recognition, autonomous driving, etc. The grand challenge is to understand the context in the real-world under uncertainty. Probabilistic inference can be of great help here as the inverse probability allows to learn from data, to infer unknowns, and to make predictions to support decision making.

## Author Benefits

**Open Access:** free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

**High Visibility:** indexed within [Scopus](#), [ESCI \(Web of Science\)](#), [dblp](#), and [other databases](#).

**Rapid Publication:** manuscripts are peer-reviewed and a first decision is provided to authors approximately 27 days after submission; acceptance to publication is undertaken in 4.4 days (median values for papers published in this journal in the second half of 2025).

## Contact Us

*Machine Learning and Knowledge  
Extraction* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/make](https://mdpi.com/journal/make)  
[make@mdpi.com](mailto:make@mdpi.com)  
[X@MAKE\\_MDPI](#)