



# AI



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## Machine Learning for HCI: Cases, Trends and Challenges

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### Message from the Guest Editors

Over the last few years, the field of human–computer interaction (HCI) has undergone significant progress due to contributions of machine learning (ML) techniques. The deployment of ML allows HCI researchers and practitioners to dissect user behavior, forecast user inclinations, streamline interface adjustments, and tailor interactions to personal needs and preferences, thus enabling improved interaction design and usability. ML techniques can leverage various types of HCI data such as user actions (clicks, taps, gestures), usage patterns (time spent on tasks, sequence of actions, etc.), user feedback (surveys, interviews, etc.), biometric data (eye-tracking, facial expressions, physiological signals, etc.), contextual and preference data, error logs or accessibility data (disabilities).

### Keywords

- user behaviour analysis
- gesture and voice interaction
- attention monitoring
- affective interaction
- interface adaptation
- personality trait recognition
- intelligent user interfaces
- recommender systems
- human-in-the-loop machine learning
- ethics



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# Special Issue