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## Preface

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### Mohamed Lazaar\*

ENSIAS,  
Mohammed V University,  
Rabat, Morocco  
Email: lazaarmd@gmail.com  
\*Corresponding author

### Mohammed Al Achhab and Mohamed Chrayah

National School of Applied Sciences,  
Tétouan, Morocco  
Email: alachhab@gmail.com  
Email: chrayah@gmail.com

**Biographical notes:** Mohammed Lazaar received his PhD in March 2013 from the Faculty of Sciences and Technics, Sidi Mohammed Ben Abdellah University of Fez. He was a Professor at the National School of Applied Sciences of Tétouan from 2013 to 2018. Currently, he is a Professor at National School of Computer Sciences and Systems Analysis, Mohammed V University, Rabat. He is a member of the Smart Systems Laboratory and the Rabat IT Center at ENSIAS. The Founder and General Chair of International Conference of Big Data, Cloud and Applications (BDCA'17), his research interests include the performance of machine learning methods, sentiments analysis and recommender systems.

Mohammed Al Achhab received his PhD in December 2006 from the University of Franche-Comté, Besançon, France, in the field of formal verification of reactive systems. He was a Temporary Lecturer and Research Assistant at the University of Franche-Comté from 2005 to 2006. He was an Assistant Professor at the Faculty of Sciences Dhar El Mehraz, Fez, from 2007 to 2012. Currently, he is a Professor at the National School of Applied Sciences of Tétouan. His research focuses on the analysis and validation of the business process and adaptive e-learning.

Mohamed Chrayah obtained the engineer degree in computer sciences in 2006 from National Institute of Statistics and Applied Economics. He received his PhD in Computer Sciences from UAE in 2013. He is currently a Professor of computer sciences with the National School of Applied Sciences, Tétouan, Morocco. His research involves e-learning, machine learning and big data. He has experience in e-learning and education technologies. He is a full member of the Systems Modelling and Information Technology research team. He is responsible for several courses in e-learning at bachelor and master level at MIAGE.

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