
Contents

<i>Preface</i>	<i>v</i>
<i>Contributors</i>	<i>xi</i>

PART I INNOVATIVE DATA MINING TECHNIQUES FOR CLINICAL MEDICINE

1 Actigraphy Pattern Analysis for Outpatient Monitoring	3
<i>Elies Fuster-Garcia, Adrián Bresó, Juan Martínez Miranda, and Juan Miguel Garcia-Gómez</i>	
2 Definition of Loss Functions for Learning from Imbalanced Data to Minimize Evaluation Metrics	19
<i>Juan Miguel Garcia-Gómez and Salvador Tortajada</i>	
3 Audit Method Suited for DSS in Clinical Environment	39
<i>Javier Vicente</i>	
4 Incremental Logistic Regression for Customizing Automatic Diagnostic Models.	57
<i>Salvador Tortajada, Montserrat Robles, and Juan Miguel Garcia-Gómez</i>	
5 Using Process Mining for Automatic Support of Clinical Pathways Design	79
<i>Carlos Fernandez-Llatas, Bernardo Valdivieso, Vicente Traver, and Jose Miguel Benedi</i>	
6 Analyzing Complex Patients' Temporal Histories: New Frontiers in Temporal Data Mining.	89
<i>Lucia Sacchi, Arianna Dagliati, and Riccardo Bellazzi</i>	

PART II MINING MEDICAL DATA OVER INTERNET

7 The Snow System: A Decentralized Medical Data Processing System.	109
<i>Johan Gustav Bellika, Torje Starbo Henriksen, and Kassaye Yitbarek Yigzaw</i>	
8 Data Mining for Pulsing the Emotion on the Web	123
<i>Jose Enrique Borrás-Morell</i>	
9 Introduction on Health Recommender Systems	131
<i>C.L. Sanchez-Bocanegra, F. Sanchez-Laguna, and J.L. Sevillano</i>	
10 Cloud Computing for Context-Aware Enhanced m-Health Services	147
<i>Carlos Fernandez-Llatas, Salvatore F. Pileggi, Gema Ibañez, Zoe Valero, and Pilar Sala</i>	

PART III NEW APPLICATIONS OF DATA MINING IN CLINICAL MEDICINE PROBLEMS

11	Analysis of Speech-Based Measures for Detecting and Monitoring Alzheimer's Disease	159
	<i>A. Khodabakhsh and C. Demiroglu</i>	
12	Applying Data Mining for the Analysis of Breast Cancer Data	175
	<i>Der-Ming Liou and Wei-Pin Chang</i>	
13	Mining Data When Technology Is Applied to Support Patients and Professional on the Control of Chronic Diseases: The Experience of the METABO Platform for Diabetes Management	191
	<i>Giuseppe Fico, Maria Teresa Arredondo, Vasilios Protopappas, Eleni Georgia, and Dimitrios Fotiadis</i>	
14	Data Analysis in Cardiac Arrhythmias	217
	<i>Miguel Rodrigo, Jorge Pedrón-Torecilla, Ismael Hernández, Alejandro Liberos, Andreu M. Climent, and María S. Guillem</i>	
15	Knowledge-Based Personal Health System to Empower Outpatients of Diabetes Mellitus by Means of P4 Medicine	237
	<i>Adrián Bresó, Carlos Sáez, Javier Vicente, Félix Larrinaga, Montserrat Robles, and Juan Miguel García-Gómez</i>	
16	Serious Games for Elderly Continuous Monitoring	259
	<i>Lenin-G. Lemus-Zúñiga, Esperanza Navarro-Pardo, Carmen Moret-Tatay, and Ricardo Pocinho</i>	
	<i>Index</i>	269

Data Mining in Clinical Medicine

Llatas, C.F.; García-Gómez, J.M. (Eds.)

2015, XII, 270 p. 92 illus., 82 illus. in color., Hardcover

ISBN: 978-1-4939-1984-0

A product of Humana Press