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	Collana	Statistics in practice
	Altri autori (Persone)	NaimPatrick
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	Nota di contenuto	Bayesian Networks; Contents; Foreword; Preface; 1 Introduction to Bayesian networks; 1.1 Models; 1.2 Probabilistic vs. deterministic models; 1.3 Unconditional and conditional independence; 1.4 Bayesian networks; 2 Medical diagnosis; 2.1 Bayesian networks in medicine; 2.2 Context and history; 2.3 Model construction; 2.4 Inference; 2.5 Model validation; 2.6 Model use; 2.7 Comparison to other approaches; 2.8 Conclusions and perspectives; 3 Clinical decision support; 3.1 Introduction; 3.2 Models and methodology; 3.3 The Busselton network; 3.4 The PROCAM network; 3.5 The PROCAM Busselton network 3.6 Evaluation3.7 The clinical support tool: TakeHeartII; 3.8 Conclusion; 4 Complex genetic models; 4.1 Introduction; 4.2 Historical perspectives; 4.3 Complex traits; 4.4 Bayesian networks to dissect complex traits; 4.5 Applications; 4.6 Future challenges; 5 Crime risk factors analysis; 5.1 Introduction; 5.2 Analysis of the factors affecting crime risk; 5.3 Expert probabilities elicitation; 5.4 Data preprocessing; 5.5 A Bayesian network model; 5.6 Results; 5.7 Accuracy assessment;

| Sommario/riassunto | Bayesian Networks, the result of the convergence of artificial intelligence with statistics, are growing in popularity. Their versatility and modelling power is now employed across a variety of fields for the purposes of analysis, simulation, prediction and diagnosis. This book provides a general introduction to Bayesian networks, defining and illustrating the basic concepts with pedagogical examples and twenty real-life case studies drawn from a range of fields including medicine, computing, natural sciences and engineering. Designed to help analysts, engineers, scientists and profe |