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Titolo	A statistical approach to neural networks for pattern recognition [[electronic resource] /] / Robert A. Dunne
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Descrizione fisica	1 online resource (289 p.)
Collana	Wiley series in computational statistics
Disciplina	006.32
Soggetti	Perceptrons Neural networks (Computer science) Electronic books.
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	A Statistical Approach to Neural Networks for Pattern Recognition; Contents; Notation and Code Examples; Preface; Acknowledgments; 1 Introduction; 1.1 The perceptron; 2 The Multi-Layer Perceptron Model; 2.1 The multi-layer perceptron (MLP); 2.2 The first and second derivatives; 2.3 Additional hidden layers; 2.4 Classifiers; 2.5 Complements and exercises; 3 Linear Discriminant Analysis; 3.1 An alternative method; 3.2 Example; 3.3 Flexible and penalized LDA; 3.4 Relationship of MLP models to LDA; 3.5 Linear classifiers; 3.6 Complements and exercises; 4 Activation and Penalty Functions 4.1 Introduction4.2 Interpreting outputs as probabilities; 4.3 The funiversal approximatorfl and consistency; 4.4 Variance and bias; 4.5 Binary variables and logistic regression; 4.6 MLP models and cross- entropy; 4.7 A derivation of the softmax activation function; 4.8 The finaturalfl pairing and A.; 4.9 A comparison of least squares and cross- entropy; 4.10 Conclusion; 4.11 Complements and exercises; 5 Model Fitting and Evaluation; 5.1 Introduction; 5.2 Error rate estimation; 5.3 Model selection for MLP models; 5.4 Penalized training; 5.5 Complements and exercises; 6 The Task-based MLP

6.1 Introduction; 6.2 The task-based MLP; 6.3 Pruning algorithms; 6.4 Interpreting and evaluating task-based MLP models; 6.5 Evaluating the models; 6.6 Conclusion; 6.7 Complements and exercises; 7 Incorporating Spatial Information into an MLP Classifier; 7.1 Allocation and neighbor information; 7.2 Markov random fields; 7.3 Hopfield networks; 7.4 MLP neighbor models; 7.5 Sequential updating; 7.6 Example - MartinTMs farm; 7.7 Conclusion; 7.8 Complements and exercises; 8 Influence Curves for the Multi-layer Perceptron Classifier; 8.1 Introduction; 8.2 Estimators; 8.3 Influence curves; 8.4 M-estimators; 8.5 The MLP; 8.6 Influence curves for pc; 8.7 Summary and Conclusion; 9 The Sensitivity Curves of the MLP Classifier; 9.1 Introduction; 9.2 The sensitivity curve; 9.3 Some experiments; 9.4 Discussion; 9.5 Conclusion; 10 A Robust Fitting Procedure for MLP Models; 10.1 Introduction; 10.2 The effect of a hidden layer; 10.3 Comparison of MLP with robust logistic regression; 10.4 A robust MLP model; 10.5 Diagnostics; 10.6 Conclusion; 10.7 Complements and exercises; 11 Smoothed Weights; 11.1 Introduction; 11.2 MLP models; 11.3 Examples; 11.4 Conclusion; 11.5 Complements and exercises; 12 Translation Invariance; 12.1 Introduction; 12.2 Example 1; 12.3 Example 2; 12.4 Example 3; 12.5 Conclusion; 13 Fixed-slope Training; 13.1 Introduction; 13.2 Strategies; 13.3 Fixing or O; 13.4 Example 1; 13.5 Example 2; 13.6 Discussion; Bibliography; Appendix A: Function Minimization; A.1 Introduction; A.2 Back-propagation; A.3 Newton-Raphson; A.4 The method of scoring; A.5 Quasi-Newton; A.6 Conjugate gradients; A.7 Scaled conjugate gradients; A.8 Variants on vanilla feedback-propagation; A.9 Line search; A.10 The simplex algorithm; A.11 Implementation; A.12 Examples

Sommario/riassunto

An accessible and up-to-date treatment featuring the connection between neural networks and statistics. A Statistical Approach to Neural Networks for Pattern Recognition presents a statistical treatment of the Multilayer Perceptron (MLP), which is the most widely used of the neural network models. This book aims to answer questions that arise when statisticians are first confronted with this type of model, such as: How robust is the model to outliers? Could the model be made more robust? Which points will have a high leverage? What are good starting values for the fitting algorithm?

2. Record Nr.	UNINA9910788235403321
Autore	Ueda Kenichi
Titolo	Life Expectancy and Income Convergence in the World : : A Dynamic General Equilibrium Analysis / / Kenichi Ueda
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ISBN	1-4623-0030-8 1-4527-5311-3 1-282-84109-2 9786612841095 1-4518-7016-7
Descrizione fisica	1 online resource (36 p.)
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Soggetti	Life expectancy - Econometric models Income - Econometric models Cost and standard of living - Econometric models Convergence (Economics) - Econometric models Insurance Labor Macroeconomics Human Capital Skills Occupational Choice Labor Productivity Health: General Aggregate Factor Income Distribution Macroeconomics: Consumption Saving Wealth Insurance Companies Actuarial Studies Labour income economics Health economics Insurance & actuarial studies Human capital Health Income

Consumption
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Nota di contenuto	Contents; I. Introduction; II. Model and Quantitative Results; A. Technology and Preference; B. Representative Agent; C. Neutrality of Longevity under Neoclassical Assumptions; D. Positive Value of Life with Costly Human Capital Transfer; III. Quantitative Assessment; A. Computable Form; B. Benchmark Parameter Values; C. Dynastic General Equilibrium Value of Life; D. Sensitivity Analysis; E. Income Convergence; IV. Case and Imperfect Altruism; V. Concluding Remarks; Reference; Figures; 1. Evolution of Life Expectancy; Tables; 1. Parameter Values; 2. Benchmark Quantitative Assessment 3. Sensitivity Analysis 4. Convergence of Income and Full Income; Appendices; I. Solutions; A. Optimal H/K Ratio; B. Euler Equation; II. Imperfect Altruism Case; A. Proof of Proposition 2; B. Proof of Proposition 3
Sommario/riassunto	There is world-wide convergence in life expectancy, despite little convergence in GDP per capita. If one values longer life much more than material happiness, the world living standards may this have already converged substantially. This paper introduces the concept of the dynastic general equilibrium value of life to measure welfare gains from the increase in life expectancy. A calibration study finds sizable welfare gains, but these gains hardly mitigate the large inequality among countries. A conventional GDP-based measure remains a good approximation for (non) convergence in world living standards, even when adjusted for changes in life expectancy.