<<应用多元统计分析方法>>

图书基本信息

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内容概要

应用多元回归分析方法,样本相关,多元数据点图,特征值和特征向量,复合分析原理,因子分析,判别分析,逻辑斯谛回归方法,聚类分析,均值向量和方差-协方差矩阵,方差多元分析,预测模型和多元回归。

本书统计内容覆盖面广于国内的概率统计教材,内容安排颇有新意,例如,在处理回归分析时,强调了从建模的观点与需要来考虑。

本书设有大量的例题与练习题,实用面丰富,统计思维清晰。

本书适用于高等院校统计学专业和理工科各专业本科生和研究生作为双语教材使用。

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章节摘录

插图: Answer each of the following questions: a Without doing any statistical analyses, please try to Do you see any outliers in this data set? If so, which employees answer the following questions as best you can. lookto be outliers? Explain why you think these employees are outliers. Obviously, the responses are discrete, so these data cannot truly bedistributed as a multivariate normal population. However, do youbelieve the variables are approximately multivariate normally distributed? Explain your answer. The answers to the two preceding questions are not easy. Most researchers are not able to look visually at a data set and provide accurateanswers to these questions. The reason for asking you to consider thesequestions at this point in time is to try to excite you about someupcoming methods that may help provide good answers to these questions. b Using a statistical computing package of your choice, find the correlation matrix corresponding to the responses to these 15 items. e Can these responses be partitioned into subgroups so that the responses within a subgroup have high correlations with one another, and sothat responses in different subgroups have low correlations with oneanother? If so, what responses belong to each of the subgroups? d Consider the first three responses. Construct 95% confidence intervalsfor the true correlation between each pair using any method you wish. Do any of your intervals include zero? Which ones? Show your work. e Using any computer plotting package of your choice, create pairwisescatter plots for the first five responses. t Consider your plots in part e. Do there appear to be nonlinear relation-ships between these pairs of variables? Explain your answer. 11 Consider all of the survey data obtained from 975 employees of a national restaurant chain described in Appendix B. a Using a statistical computing package of your choice, find the correlation matrix corresponding to the responses to the first 18 questions in the survey. b Can these responses be partitioned into subgroups so that the responses within a subgroup have high correlations with one another, and sothat responses in different subgroups have low correlations with oneanother? If so, what responses belong to each of the subgroups? e Choose the three pairs of responses that have the highest correlations between them, and construct 95% confidence intervals for the truecorrelation between each pair using any method you wish. Do any ofyour intervals include zero? Which ones? Show your work.

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《海外优秀数学类教材系列丛书:应用多元统计分析方法(影印版)》可以作为非数学专业本科和研究生的教材,也可以作为各专业研究人员和工程技术人员的工具书。

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