Proportional And Non Proportional Hazards Regression: The Data Sciences

Table of Contents

Proportional and non-proportional hazards regression models are used to analyze survival data, which is data that records the time until an event of interest occurs. The event of interest can be anything from death to disease recurrence to job loss. Proportional hazards models assume that the hazard of the event is constant over time, while non-proportional hazards models allow the hazard to vary over time.

Survival Analysis: Proportional and Non-Proportional Hazards Regression (Springer the Data Sciences)

by John O'Quigley

4.5 out of 5

Language : English
File size : 11673 KB
Print length : 491 pages

Proportional Hazards Models

The most common proportional hazards model is the Cox proportional hazards model, which is a semi-parametric model that assumes that the hazard of the event is proportional to a linear combination of the covariates. The Cox proportional hazards model is a very flexible model that can be used to analyze a wide variety of survival data.

Non-Proportional Hazards Models

Non-proportional hazards models are used when the hazard of the event is not constant over time. There are a number of different non-proportional hazards models, including the accelerated failure time model, the Weibull model, and the log-normal model. The choice of which non-proportional hazards model to use depends on the data and the specific research question.

Applications

Proportional and non-proportional hazards regression models are used in a wide variety of applications, including:

- Medical research: To study the survival of patients with cancer, heart disease, and other diseases.
- Social science research: To study the duration of unemployment, job satisfaction, and other social outcomes.
- Business research: To study the survival of businesses, the duration of customer relationships, and other business outcomes.

Proportional and non-proportional hazards regression models are powerful tools for analyzing survival data. These models can be used to identify the

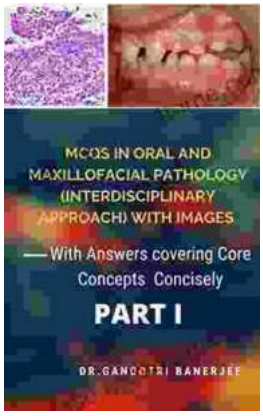
factors that are associated with the occurrence of an event of interest, and to estimate the probability of the event occurring over time. Proportional and non-proportional hazards regression models are widely used in a variety of fields, including medical research, social science research, and business research.

Survival Analysis: Proportional and Non-Proportional Hazards Regression (Springer the Data Sciences)

by John O'Quigley

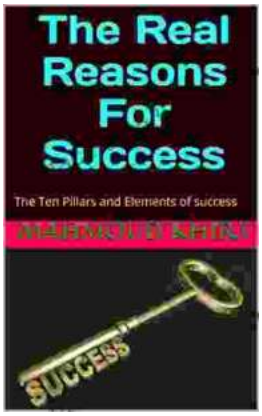
4.5 out of 5

Language : English
File size : 11673 KB
Print length : 491 pages



Unveiling the Secrets of Core Concepts: The Ultimate Learning Companion

Are you ready to unlock the doors to academic success and conquer core concepts with confidence? Look no further than our groundbreaking book, "With Answers Covering...



Unlock Your True Potential: Uncover the Real Reasons For Success

Embark on a Transformative Journey to Extraordinary Achievements Are you ready to break free from mediocrity and unlock your true potential? In his...