

Dependent Random Weighting

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Introduction

We were interested in learning about resampling methods for irregularly spaced time series data. This led us to read the paper

"The Dependent Random Weighting" (2015) by Srijan Sengupta, Xiaofeng Shao, and Yingchuan Wang.

The paper:

- Introduces a method that assigns random weights to the irregular time series data
- Incorporates a dependence structure that is similar to the data when assigning weights
- Uses the weights when drawing bootstrap samples from the data

Irregular Time Series Data

Irregular time series data can occur in two ways.

1. Missing Values: Time series occurs at equally space intervals but not all data points are observed



2. Unequal Intervals: Times when the data are observed are generated from a 1-D point process



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Simulation

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