

# Investigation of Suitability of Dynamic Time Warping for LED Degradation Time Series Classification

*Modeling, Statistics, Programming*

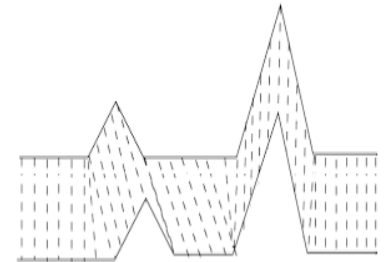


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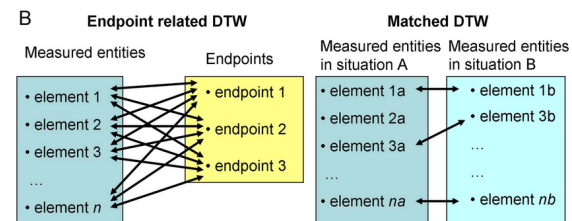
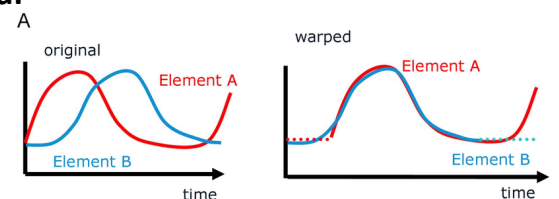
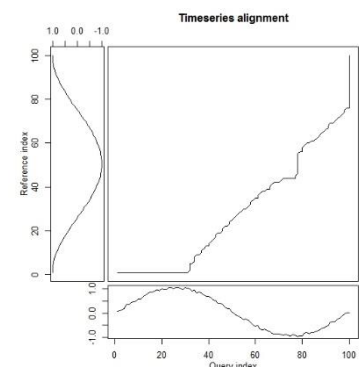
LED light sources are nowadays widely used in various applications. Over the lifetime of the LED, both the intensity and the shape of the spectrum change due to degradation processes affecting the LED. Therefore, it is important to uncover underlying degradation processes in order to determine the expected lifetime of the LED.



The purpose of this work is to investigate whether Dynamic Time Warping (DTW) classifiers are suitable for classifying LED lifetime data. The work is divided into the following work packages:

- Literature research on DTW for univariate and multivariate time series
- Implementation of DTW algorithm(s)
- Evaluation of implemented algorithm(s) on a given data set
- Evaluate results in terms of suitability for further use

The specific task and the scope of the work can be adapted to the students' wishes or professional preferences.



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