REGRESSION ANALYSIS ALGORITHM FOR CIRCULAR DATA

Enes Abdurrahman Bilgin[1], **Sıddık Keskin**[2]

[1]Faculty of Education, Yüzüncü Yıl University, Van, Turkey
[2]Faculty of Medicine, Yüzüncü Yıl University, Van, Turkey

MSC 2000: 62J99,68N01

Abstract

In this study, we aimed to develop a software algorithm that can provide the opportunity to create the foundations of a regression of circular data without any additional information. For this purpose, we have developed special algorithms for circular regression and some basic circular statistics. Some of these are mode, mean, standard deviation and correlation. Algorithms have been developed with c# programming language. It was created for this purpose and approximately 3760 lines of code. We will give obtained results and error rates.

Keywords: circular regression,software algorithm,c# programming language

References

[1] T. Downs and K. V. Mardia, Circular regression. *Biometrika* **89** (2002) 683-697.

[2] N. I. Fisher and A. J. Lee, Regression models for an angular response. *Biometrics* **48** (1992) 665-77.

[3] S. R. Jammalamadaka and A. SenGupta, Topics in Circular Statistics, Section 1.3, World Scientific Press, Singapore (2001).

[1]First Author's e-mail: ns_abd@hotmail.com
[2]Second Author's e-mail: skeskin973@gmail.com