

Rebuttal for MidcurveNN paper reviews

Reviewer 1:

- Author Comments: This paper presents an application of an Artificial Neural Network for the computation of the midcurve of a polygon. The paper provides some data of preliminary experiments using simple polygons which have been previously used, in various/different orientations, for training. The paper contribution is rather limited since, although the current approach is interesting, the research is at a very preliminary stage. In addition, the use of English language is not adequate for a journal paper since there are many syntax and spelling errors throughout the manuscript.
- **Rebuttal Review 1:** The content has been updated by correcting suggested errors.

Reviewer 2:

- Author Comments: The paper proposes a midcurve prediction method using DL. Can some performance metrics like training accuracy, testing accuracy be provided?
- **Rebuttal Review 2:** Performance measurements would be more accurate in a larger data scenario where order of magnitude can be demonstrated.

Reviewer 3:

- Author Comments: This paper proposes a method that uses a single layer encoder and decoder network for the dimension reduction to search Midcurve of a 2D thin polygonal shape. Following suggestions are for the author to improve the paper.
 - The proposed method in Section 3 should be detailed. For example, what are application shapes that trained system can work if only shapes in Figure 8 are considered? What are the training time and accuracy of the system? What are causes of wrongly classified output Midcurve?
 - The proposed method should be compared with other existing methods for the efficiency and accuracy.
 - Details of references 9, 10 and 11 should be added. More related work review is expected.
- **Rebuttal Review 3:**
 - As mentioned in Section 3, examples of English alphabets are given for easy understanding and verification of the proposed method. The proposed method is applicable to wide variety of thin wall 2D profiles.
 - Although methods are available for Midcurve generation for organic shapes, and some using deep learning, there is none that came across for Midcurve generation for mechanical shapes (2D Thin Wall profiles) using Deep Learning. So suggested comparison could be done in future once such comparable approach becomes available.
 - Author feels appropriate details have been added on approaches trying to solve similar problem. As and when, more approaches surface, future papers can surely cite them.