

ABSTRACT

The variety of batik motifs in Indonesia, especially Nitik batik motifs, requires a special approach for proper motif recognition. Nitik batik developed with 60 motifs, making it difficult to segment Nitik batik motif patterns due to the diversity of motifs and the limited number of people who are proficient in understanding them. The purpose of this research is to implement the Segment Anything Model (SAM) algorithm for segmenting Nitik batik motifs. This research uses five types of frequently used batik motifs namely Sekar Kemuning, Sekar Pacar, Chicken Claw, Cinde Wilis and Truntum Kurung. In adjusting the segmentation, the SAM architecture is modified by using the image encoder as a feature extractor, and adding a segmentation head to generate mask predictions automatically without prompts. This research successfully implements SAM for Nitik batik motif image segmentation. The evaluation results show that the developed model is capable of segmenting motifs with an average IoU value of 0.836 and Dice coefficient of 0.910, which indicates a fairly good segmentation performance of the Nitik batik motif image. This research proves that the SAM approach is effective for image segmentation of Nitik batik motifs and has the potential to support digital cultural preservation.

Keywords: Nitik Batik Motif, Segment Anything Model (SAM), Image Segmentation