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# Classifying Ikat Gringsing Woven Cloth Motifs Using Convolutional Neural Network

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**Abstract**

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**Abstract:**
Indonesia boasts a unique traditional woven fabric called ikat gringsing, created using the double ikat technique and natural materials from Tenganan Village, Pegringsingan, Bali. The motifs are inspired by the surrounding nature, featuring animals and plants commonly found in the area. The intricate and diverse designs of gringsing woven cloth have attracted many tourists, and this cloth has the potential to boost Bali's and Indonesia's tourism sector. However, it can be challenging for tourists to find detailed information about gringsing woven fabrics, and some may not even know the names of the motifs that catch their eye. To address this issue, a deep learning model utilizing CNN has been developed to introduce ikat gringsing woven fabric motifs. With an accuracy rate of 82%, the model successfully recognized 402 fabric motifs out of a total of 470 datasets. Utilizing the dropout technique to prevent overfitting resulted in consistent accuracy values throughout the training and testing process. The model's validation results in the training process averaged at 86%, while the testing process yielded an accuracy rate of 82% out of the 10 folds.

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