

ANCIENT SINHALA INSCRIPTION CHARACTER RECOGNITION USING DEEP LEARNING

Dinithra Thantilage

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**Department of Computing
Informatics Institute of Technology, Sri Lanka
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University of Westminster, UK**

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Abstract

Inscriptions are a great source of information revealing history. Reading of inscriptions which is also known as epigraphy can only be done by professional epigraphists. It was also revealed that currently epigraphy on ancient Sinhala inscriptions are totally dependent on the knowledge and experience of the epigraphists and there is no possibility for the other interested parties to read inscriptions due to the lack of literacy on inscription characters. The proposed system in this research will aid in the process of epigraphy for epigraphists and overcomes the barrier for reading inscriptions for history enthusiasts. For this research an inscription character image dataset was created and used to train a deep learning model which can recognise ancient inscription characters and translate to modern Sinhala characters. In the proposed system inscription images are extensively pre-processed to reduce image noise present in inscriptions. The system has the ability to recognise characters from estampages of inscriptions itself and translate to modern Sinhala characters. The system was able to successfully recognise characters with varied levels of image noises and translate to modern Sinhala characters.

Keywords: Image Processing, Deep Learning, Convolutional Neural Networks