# Abstract

Investigating the applicability of neural networks in the
recognition of handwritten traditional Irish script.
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Language preservation is the effort to prevent languages from becoming unknown. Language preservation is widely practiced as the death of a language can result in the loss of the speaking population's culture, oral traditions and other inherited beliefs. In order to preserve a language, an effort can be made to preserve the language's manuscripts through transcription. As the number of manuscripts can grow to large numbers, manual transcription can be both expensive and time-consuming. As such, an automatic process is required. In the case of traditional Irish script however, no such research has been conducted in creating this automated process.

Neural networks have a wide range of applicable uses, several of which involve pattern recognition. Due to the suitability of neural networks in pattern recognition, they have seen an increased use in text transcribers and handwriting recognisers. This work aims to show applicability of neural networks in creating an automatic transcription tool for handwritten traditional Irish script.

The report details each step in the created pipeline, justifying its presence while also mentioning various researched methods which were not suitable for this application. The work then makes use of the created pipeline in order to train a neural network and evaluate its performance in order to determine the applicability of the solution.

By analysing the performance of the trained neural network, this work shows that applications exist for neural networks in the field of handwritten traditional Irish script recognition. The work also provides conclusions based on gathered results, on how to improve the performance of the network moving forward.