

## **Spectral Features of Graphs Associated with the Geez Writing System**

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This paper examines the graph spectra of the characters of the Geez Fidel (writing system). We will examine the spectrum of the different matrices associated with graphs of these characters.

Graphs are being used more and more in optical character recognition of some indigenous African writing systems. This paper is a step towards working on a model that uses graphs in the classification stage of character recognition of the Geez writing system. The Geez Fidel is used to write languages several languages such as Tigre and Tigrigna in Eritrea, and Amharic in Ethiopia.

Keywords: graph spectrum, incidence matrices, adjacency matrices and optical character recognition.