

Georgian Font Recognition Web Application using Convolutional Neural Networks

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In the modern digital landscape, fonts are essential for branding, product design and user experience. However, because Georgian is unique and low-resource script, Georgian developers and designers lack the professional tools that are standard for widespread scripts like Latin.

This project develops a font recognition system using a Convolutional Neural Network (CNN), integrated into a practical web application that allows users to upload images for real-time font identification. Due to the scarcity of large-scale labeled datasets, the project employs transfer learning and fine-tuning methodologies to adapt pre-trained models to this unique script, supplemented by a synthetic data generation pipeline.

This project aims to restore the Georgian script to its rightful place in the digital world, providing designers and developers with suitable tools for increasing efficiency and productivity. Furthermore, this system serves as a catalyst for font engineers to create diverse new typefaces while simultaneously enabling foreign scholars to study and learn about Georgian typography more closely, thereby driving progress across multiple disciplines. Ultimately, this project acts as a bridge, connecting our ancient heritage with modern technology.

References

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