

Latex Camscanner

Group: S18-34

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Key Words

- Computer Vision
- Machine Learning
- OCR
- Android App

Most institutions and researchers present their findings with a document format called latex. Latex is widely used in professional environments but not everyone knows how to use Latex. Lack of mobility for LaTeX mathematical conversion from handwritten notes has proven to be extremely difficult. There are various OCR software that read text which can be used to translate to Latex but equations are an important part of Latex. There is a lack of OCR for scientific and mathematical expressions. We want to create a program that takes handwritten equations and converts it to Latex.

We will design an app for a mobile phone, similar to a camscanner application, using android studio. When you hover the camera over a paper, the application will detect the corners of the paper, and process the selected image. We will use computer vision techniques to detect and crop the paper out of the image, and find positions of potential equations. Then use machine learning techniques to classify the extracted characters and export a file based on the classification with the recognized characters. We can use databases such as MNIST to help in learning handwriting. We will then convert it to LaTeX.