Tell us what your idea is.

Start video recording of a book and turn the book page, application detects via on-device ML to convert this page to selectable text of pdf page. This application will help users in generating books to pdfs via videos in less time.

Tell us how you plan on bringing it to life.

We believe that this idea has a lot of impact on the users. Currently, in order to create pdf of hard copies, users need to first capture the images, and then convert these images to PDFs, but ***limitation of this*** *mechanism is that users would not be able to select the text available in the image. This idea has many advantages in terms of performance and effectiveness. Users will start video say at 30 fps, then, during video users will turn over pages, application will detect page turn and then text available in the frame will be converted to PDF as selectable text. How machine learning is involved:*

- *(1) If video is running at 30 fps and turning the page takes 1 second, then selecting a best frame*
- *(2) Detecting the page turn during video*
- *(3) Detecting page boundaries in the frame*

Tell us about you.

We (Murtaza and Mustansar) as a team has combination of ML and Android experience. More than 8 years of professional work experience in the android and 3 years experience in machine learning.: Some highlights of professional experience

- House detection and segmentation from satellite imagery
- Image super-resolution
- Dataset classification using neural network https://github.com/murtazakhan28/MNIST-dataset-classification-using-neural-network-in-python-and-numpy
- Survey conducting application https://play.google.com/store/apps/details?id=com.surveyauto.surveyauto:
- *Developed Pakistan's first School Education System (https://play.google.com/store/apps/details?id=pk.gov.pitb.sis)*
- *Developed Eye detection and recognition based attendance management system using IrisShield USB by Iritech, Inc. (https://play.google.com/store/apps/details?id=pk.gov.pitb.saafpunjab.iris)*
- *Developed Human Face detection based Camera using OpenCV4Android*