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Philosophy of MILE

- ⇒ Research relevant to people and life around us.
- ⇒ No download of research topics, data or code!
- ⇒ Having chosen to work on an applied area, we deal with whatever is needed to reach the goal.
- ⇒ All the data we use have been collected by us: India has a huge population and so, there is no dearth for creation of standard databases.

Deployment of our OCRs

- ⇒ Using MILE Tamil OCR (Tamil Gnani), Worth Trust, Chennai digitized 600+ Tamil books; the Braille books are used by 100's of students.
- ⇒ Kannada school & college books, digitized using our Kannada OCR, are available to all the blind schools as audio books.
- ⇒ Many organizations are using our OCRs to digitize old books, which are now out of print.
- ⇒ Many blind individuals use our OCR & TTS.
- ⇒ Manthan Award (South East Asia and Asia Pacific) 2014 - e-inclusion & accessibility category.

Deployment of our TTS

- ⇒ Uses our DCT-based prosody modification.
- ⇒ Ranked second in Blizzard TTS Challenge 2013.
- ⇒ Gives different output each time for same text.
- ⇒ Using MILE Tamil TTS (Thirukkural), Anna Centenary Library, Chennai sends voice messages to 1000+ blind members around Tamil Nadu.
- ⇒ Using our Kannada TTS, Kannada school books are available as audio books on multiple platforms (.mp3, iTunes, etc.).
- ⇒ Manthan Award, 2015 - e-education category.

Camera Captured Document Analysis and Recognition

- Text extraction from scene images
- Segmentation of coloured scene word images
- Recognition of the segmented word images
- Translation/transliteration of the words into the target language/script.
- Text to speech conversion of the words
- Top positions in ICDAR 2011, 2013, 2015, 2017 Robust Reading Competition – word recognition.

Free tools from MILE lab

- Read web text in your script
 - Tool for typing in any Indian script using QWERTY keyboard - using anyone of many keyboard mappings - on Linux & Windows.
- Recognition of anyone of 11 scripts at the word level from a multilingual document.
 - Recognition of online handwritten documents in Tamil, Kannada, Hindi.
 - Enhancement of binary, low-resolution, scanned document images using superresolution techniques, increasing OCR accuracy & readability.

ASR of code-mixed speech

- ⇒ Working on recognition of Hindi, Kannada & Tamil speech, including Hinglish.
- ⇒ Tamil & Kannada are morphologically rich; each verb root gives rise to 1000's of derived words; trying sub-words as units/grams.
- ① The author thanks Tata Trust Travel Grant for funding participate in this conference.