TEXT-TO-BRAILLE & TEXT-TO-AUDIO TRANSLATOR

SUN KWON ME'17
SOYOUNG MOON ME'17
ADVISORS: PROFS. STAN WEI AND ROBERT DELL

The two main formats of reading for the visually impaired are audio and Braille. Interviews with optical research professionals revealed the visually impaired prefer to read using audio and Braille in equal measures. However, existing devices only translate text-to-Braille or text-to-audio.The team presents a device that translates printed text-to-Braille and printed text-to-audio, based on the user's preferred method of reading, on a singular device to increase accessibility to reading materials. Once the device is turned on, it automatically takes a picture of the printed text after 10 seconds. With the coding in the Raspberry Pi and Arduino Uno, the device automatically converts the image file into a text file. Then, the text file can be converted into either Braille or audio depending on the user's preference. After a minute of inactivity, the device automatically turns off.