Handwriting to Braille: Creating a Device to Facilitate the Computation of Handwritten Data

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There are currently 7.6 million blind people living in the United States. According to The National Federation of The Blind, “Braille is vital to literacy for the blind. Compared to listening to audio versions of books or other materials, reading and writing with Braille teaches grammar, spelling, and punctuation.” 1 We’ve created a handwriting-to-braille translator as a tool for the visually impaired. The digital aspect of this process was done by utilizing a neural network to learn handwriting. We used a combination of stepper motors and 3D printed cogs and gears to develop the first functional prototype of our handwriting-to-braille translator. This allows blind people to read notes and documents, even handwritten ones. We used a Raspberry Pi because it is a small, pocket-sized computer. We believe that this tool will be very useful to anyone who is blind. In the future, we plan on integrating an audio aspect to compliment the handwriting-to-braille translation. 1Blindness Statistics. (n.d.). Retrieved from http://www.nfb.org/resources/blindness-statistics

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