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Competitive Analysis.

There are several educational software programs that help individuals ranging from Elementary School Students to Senior Citizens. These programs include downloadable/pricey options such as *Mavis Beacon, Typing Instructor*, and online-free web apps such as *www.typing.com*, *www.typingclub.com,* and much more.

All these programs are extremely similar in terms of user interface. I will specifically be focusing on *www.typing.com* and *www.typingclub.com* because they are easy to access without any cost associated. Both programs feature all have two images of hands, which are then used to color the specific fingers that should be used to type the next letter. There is an image of a keyboard that highlights the key that should be pressed next so that the user doesn’t have to look down at the keyboard, which would then ruin the goal of the software in the first place. Furthermore, there are 2-3 lines of words/letters that are used to prompt the user to start typing. When a letter is typed correctly the letter is highlighted red and then moves on to the next letter that the individual has to type.

Both programs also display accuracy and words/per minute, which are constantly being updated as the user is typing. Lastly, these interface is the same for all levels which start out from beginner levels where the user learns how to type simple letters. For example, Level 1 in www.typing.com is letters f,g,h,j and so on. Both programs also offer a Typing test that gives the users a way to determine their speed and accuracy by asking them to type out several sentences. Lastly, they also have options of testing one’s typing proficiency by having small games that require the user to type words that then help the user win the game.

My program will attempt to use all of these features that were listed above as they seem crucial to helping the student learn how to type correctly and slowly guide them toward correct habits when typing, increasing speed and accuracy at the same time.

In addition to all these features, I will attempt to use sound with my program to help guide those who are visually impaired so that they too can learn how to type. This is a feature that I have not seen in any of the previously listed programs. Although there are programs that do specifically target visually impaired students, there is no single program that addresses both the regular typing education interface along with features for blind students. As of now, there are few pieces of typing software such as the *Talking Typing Tutor*, which uses touch-typing skills using speech instruction. There is verbal performance feedback that communicates speed and accuracy. Furthermore, I will be implementing a little bit of pseudo-machine learning so that the program can figure out where the individual is making the most mistakes – something that is found in some advanced programs such as Mavis Beacon.

With this, I am going to create a program that not only copies the user interface of well established typing programs, but I will also incorporate sound into the program so that visually impaired students can hear what letter they are supposed to type and what error they have made in order to correct themselves. Therefore it will be a combination of the two types of programs discussed earlier. These will allow them to learn typing despite being able to actually see anything.