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15-112

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Design

I created a program that teaches students to learn how to type. Not only does this program cater to your typical elementary school student, but it also helps those who are visually impaired. First off, there is a login page that allows each user to have the program interact with the student’s need, instead of being a generic program for all students. A user can create a username and use it in the future, where the data that the computer learns from their performance is saved(using cPickle).

Furthermore, after logging in there are different levels that the student can choose from, which means that all keys on the keyboard are covered. Once someone chooses a level, 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 does not allow the user to proceed to the next letter until they have truly learned how type the letter they are typing incorrectly. Furthermore, there are images of hands on the screen to show which finger should be typing which letter/symbol at the moment. This helps the student learn how to type, but also correctly.

If the student wishes to turn on the sound, then he/she will hear a text to speech converter (os module) prompt the user to type the next word. If the student happens to mess up, then the program will correct their mistakes, by spatially describing where the correct key is. Through this, a student can learn how to type even if they are unable to see the keyboard.

Lastly, there is a stats page, that logs in every time a user uses the program, showing how their words per minute and accuracy have been changing over time. This allows the student to track their data thoroughly.