

SPEAK Tool

Eric Rowles
Student
Utah State University

Project

Speech instructors are important to help students speak accurately and clearly.

However, the most important part of learning is practice. Students can currently only practice while with their speech instructor.

This tool would allow students to practice while away from their instructor. This would help them learn more quickly and effectively.

Instructors would also be able to use this tool to monitor student progress.

System

This tool is composed of four parts:

- The microphone picks up words to be stored or compared.
- The storage module stores recorded words for later.
- The speech comparison module compares new words to stored words.
- The statistics module tracks accurately pronounced words.
- The touchscreen displays this information and allows user selections.

These modules combine to allow the user to record and practice words.

Methods

Problem: Computers are bad at understanding speech.

Solution: Instructor helps the student record a word correctly. This means the computer only needs to compare two words.

The process is as follows:

- The student records a word correctly with the instructor.
- The instructor assigns the student homework.
- The student uses the device to practice the word.
- The instructor checks that the student's pronunciation is correct.



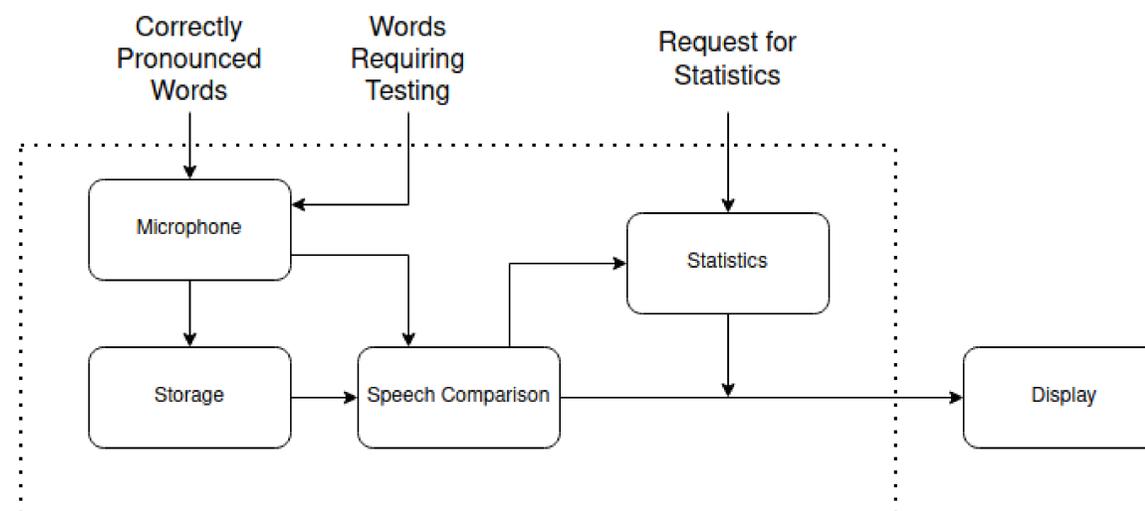
Working Device

Conclusion

Speech comparison is difficult, even when there is a template to compare it to.

This means that this tool is currently not precise enough to correctly practice with.

However, this type of tool is still important for learning and growth. A more polished model would certainly be useful.



System Diagram

