SPEECH THERAPY FOR KIDS
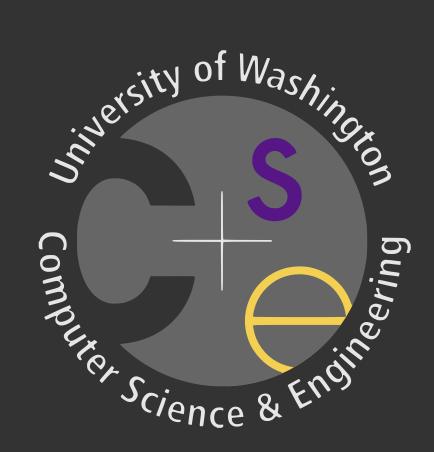
Ryan Drapeau, Nick Huynh, Aaron Nech

PROBLEM

An estimated **8-9%** of children are affected by speech disorders. **50-70%** of them struggle academically up until they graduate[1].

Children can spend **several years** in therapy to treat a speech disorder[2].

In many cases, a very small number of certified speech therapists manage and treat a **large number** of children[2].

This makes practice time very **sparse** Leading many parents to seek additional therapy in the home setting[2].

Unfortunately, an additional therapist privately paid is also very **expensive**, out of budget for many parents[2].

SOLUTION & EXAMPLE USE

We propose a childrens game to practice speech as "homework" from the therapist.

Therapist assigns Kimbee game as homework.

▼

Students practice speech while playing, getting instant feedback on their pronounciation.

▼

Student speech and context information is saved on a central web server for review by therapist.

▼

Therapist listens to student speech prior to next appointment and uses this information to better target therapy.

RESULTS & FUTURE WORK

Overall we have recieved very positive feedback regarding this technology for use in a speech therapy setting.

- Deploy this project in Arlington, WA under therapist Richard Kreider.

- We would like to add more target speech sounds. Currently, we only support targeting the 'R'-'W' sound replacement.

- Add more mini games to increase student interaction and desire to play.

- Create a token economy in the game that increases desire to play and a feeling of reward.

CITATIONS

1. R. Kreider. Personal interview, January 2015.

2. Statistics on Voice, Speech, and Language. http://www.nidcd.nih.gov/health/statistics/pages/vsl.aspx, March 2015