





# Introduction

- According to the Organization for Economic Cooperation a Development (OECD), the mean proficiency in literacy ame adults in the US and Canada is at a Level 2.<sup>1</sup>
- Adults at this level can't process dense texts, eliminate irrelevant information, perform multi-step operations, or evaluate the reliability of a source.<sup>2</sup>
- Low-literacy affects:
  - employment  $\rightarrow$  difficult to land jobs or advance careers;
  - socio-economic status  $\rightarrow$  stigma and lower-paying jobs;
  - & health  $\rightarrow$  more workplace accidents and medication misuse.<sup>3</sup>

## Purpose

 The Reading Tutor will be a free to use website that is personalized for the literacy level of every user.

## Process

• I worked on streamlining the data entry process and improving the user intake experience.

# **Data Entry**

 Grouped data from the master spreadsheets and organized it into spreadsheets designated for each scenario.



Figure 1: This was the process for organizing the data into spreadsheets.

# **A Reading Tutor for Low-Literacy Adults**

Sarah Amaneddine, Tyler Heise, Jill Zheng, William Wong, Shuonan Pei, Carrie Demmans Epp **Department of Computing Science, University of Alberta** 

and	
nong	

# Coding

- Learned how to code in HTML, CSS, and Javascript using Codecademy and w3schools.
  - Focused on forms, buttons, and web-design elements.
- Used the operating system Ubuntu and a coding platform called Visual Studio Code to create the pages that collected the user's interests.

## **System Architecture**

Front End	<ul> <li>HTML to create the structure of the</li> <li>CSS to style the HTML elements.</li> <li>Javascript to dictate how the webs</li> </ul>
Back End	<ul> <li>MySQL stores the user's data.</li> <li>Python is how we deliver information user.</li> </ul>
Full Stack	<ul> <li>Django puts the front end and the k together.</li> </ul>

Figure 2: Front-end development creates what the user will see in a website. Back-end development is the "behind the scenes" work that takes care of databases and such. Full stack is a combination of the two.

## **Results**

• This is the page that collects the user's interests.



Figure 3: Relevance is a motivator for the website's user demographic so the content is personalized to each individual based off what their interests are.

- website.
- ite behaves.
- on to the
- back end

#### • There were some bugs in the code such as this one where the borders of the selected options were not aligned with the images.



Figures 4, 5: The offset borders were fixed.

#### Discussion

- The next step for the interests page is to log the user's interests into the database.
- More scenarios will be created to correlate with the interests of the user.
  - ex. A sports scenario for users that are interested in sports.

### **Literature Cited**

- OECD (2013), "OECD Skills Outlook Tables of results", in OECD Skills Outlook 2013: First Results from the Survey of Adult Skills, OECD Publishing, Paris, https://doi.org/10.1787/9789264204256-11-en.
- 2. OECD (2013), "Proficiency in Key Information-Processing Skills among Working-Age Adults", in OECD Skills Outlook 2013: First Results from the Survey of Adult Skills, OECD Publishing, Paris, https://doi.org/10.1787/9789264204256-6-en.
- "Consequences of Illiteracy: Literacy Foundation." Fondation Pour L'alphabétisation, www.fondationalphabetisation.org/en/causes-of-illiteracy/consequences-of-illite <u>racy/</u>.

## Acknowledgements

I would like to thank Tyler Heise, Carrie Demmans Epp, the Reading Tutor team, and the EdTeKLA research group for guiding and helping me this summer. Also, thank you to Canada Summer Jobs and Process Solutions for sponsoring my position here at WISEST.



out Us Help		Your Account Sign Out
	What do you like to cook?         Pick from the following.         Dick from the following.         Dick       Dick         Dick       Dick         Dick       Dick         Dick       Dick         Dick       Dick         Dick       Dick	